

No. 15057

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United States  
Court of Appeals  
for the Ninth Circuit

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MOIST COLD REFRIGERATOR CO., INC., a  
Corporation,

Appellant,

vs.

LOU JOHNSON CO., INC., a Corporation;  
MEIER & FRANK COMPANY, INC., a Cor-  
poration; ADMIRAL CORPORATION, a  
Corporation, and AMANA REFRIGERA-  
TION, INC., a Corporation,

Appellees.

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**Transcript of Record**

In Four Volumes JUL -6 1956

Volume IV  
(Pages 1205 to 1573)

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Appeal from the United States District Court for the  
District of Oregon

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(Testimony of Glenn Muffly.)

The Court: Very well. In other words, the portion that was deleted appearing on Page 6 of the file wrapper of the original patent is shown on a soft copy of 114-M.

Mr. Ramsey: That is correct.

The Court: All right. Let us start over again because no one remembers what you did.

Q. (By Mr. Ramsey): Would you identify on the soft paper copy that portion that was added, by column and by line?

Mr. Cuningham: Oh, if your Honor please, I object. This is all in the record. It is in that file wrapper. That is in evidence here. It can serve no purpose to duplicate it over and over again this way.

The Court: All right; go ahead. I do not think that the jury wants to go through the entire file wrapper to find out these various things. This is the simplest and quickest way to handle it.

The Witness: The typewritten insert that is pasted at the left of Column 3 in the soft paper copy of Reissue Patent 23058, Defendants' Exhibit 114-M, coincides with the wording which appears in the file wrapper record on Page 6 starting at Line 18 and finishing in Line 24.

Q. (By Mr. Ramsey): Would you identify in the reissue patent the part that was added?

A. The part that was added by the amendment filed July 29, 1934, in the file wrapper starts on Page 48, which is the [1270] longest and the last paragraph on Page 48, continues through Pages 49,

(Testimony of Glenn Muffly.)

50, 51, and ends on Page 52 of the file wrapper in the sixth line from the top. [1271]

Q. (By Mr. Ramsey): Now, will you locate that on the patent in suit?

A. Pardon me. There is an additional—that isn't quite all of it. Another part below that is added in this amendment. There are seven lines added to the specification on page 5 of the specification as filed.

Q. Will you identify this added material in the patent in suit, the copy in 114-M?

A. In the patent in suit, 114-M, the reissue patent, 23,058, the insertion made starts in Column 3, Line 46, goes through that column, through all of Column 4 and through Column 5, down to and including Line 52, making a bit more than a full page of printed specification.

Q. You are familiar with the terminology of the claim of the patent in suit?      A. Yes.

Q. And the terminology—words—in the specification?      A. Yes.

Q. Now, I want to ask you about some of the words that appear in the claims of the patent in suit.      A. Yes.

Q. Do you find a description of "air in the cooling compartment" in the specification?

A. No.

Q. Do you find a definition in the specification of "a maintained substantial temperature of air"? [1272]

A. Wait a minute. Now, we are referring to the specification as filed?

(Testimony of Glenn Muffly.)

Q. Read the words of the claim and I am asking you whether you find those words in the specification.

The Court: Are you talking about the original specification or the specification——

Mr. Ramsey: They are both the same, if the Court please. No. Pardon me. I meant—I get your point. No, I mean in any specification either in the original patent or the part of it originally submitted or in the reissue patent, any specification.

The Court: I think we ought to take this up in order. You have shown that for seven lines in the original file specification about 150 lines have been added.

Mr. Ramsey: That's correct.

The Court: Now, what is the point of that?

Mr. Ramsey: The point of that, if the Court please——

The Court: Well, I think you had better not answer and testify.

Mr. Ramsey: I thought I was just answering your question. I think it will appear to the Court later, not this next question, but it will appear later in this witness' testimony.

The Court: All right. Go ahead.

Mr. Ramsey: Did I fail to answer the Court's question?

The Court: No. I don't know the purpose of this, but [1273] I don't know a lot of purposes here. So go ahead.

Mr. Ramsey: Yes.

(Testimony of Glenn Muffly.)

Q. The question I asked you was whether the words in the claims "maintain substantial temperature of air" appear in the specification, any specification?

A. No. I think I should refer to my own marked copy of this rather than this one.

Q. Would that be more helpful?

The Court: Well, I don't think you can do that.

The Witness: Oh, it's my own markings.

Mr. Ramsey: All right.

Q. Do you find any words "relative humidity of air" in the specification?      A. No.

Q. Do you find any words "air in the freezing compartment"?      A. No.

Q. Do you find words "cooling refrigerant expander"?      A. No.

Q. Do you find any definition of "heat-conducting surfaces of said expander"?      A. No.

Q. Do you find the statement of the construction and arrangement of a "cooling refrigerant expander"?      A. No.

Q. Do you find any statement as to the "maintenance of [1274] temperatures of said expander and said surfaces"?      A. No; very indirectly.

Q. Do you find any statement with regard to the "maintenance of air at stable temperatures in the cooling compartment"?      A. Again, no; but it might be inferred indirectly.

(Testimony of Glenn Muffly.)

Q. Do you find a description of a "freezing refrigerant expander"?

A. The word "expander" does not appear anywhere in the specification.

Q. Do you find a description of the "heat-conducting surfaces of the freezing refrigerant expander"?

A. No.

Q. Do you find any statement as to its construction and arrangement in the specification?

A. No. I have only the drawing here.

Q. Do you find anything with regard to the "freezing refrigerant expander having a maintained temperature"?

A. No.

Q. Do you find a definition of the words "a liquefying unit"?

A. No.

Q. Do you find in the original specification as filed any description of "thermal insulation offering less resistance at one point than at another to the flow of heat in the freezing and cooling compartments"?

A. No. [1275]

Q. And that is the part that was added, you say, in January of 1934——

A. Yes. That's this insert, right.

Q. And you have testified as to what that part was substituted for?

A. Yes.

Q. Now, in interpreting these claims in the light of the specification, the disclosure, the teaching, you have had to adopt some conclusions, is that correct?

A. Yes.

Q. And I wonder whether you would step down



(Testimony of Glenn Muffly.)

to the foot of the exhibit 16-A and tell us what have you adopted as a cooling compartment?

A. As cooling compartment I have adopted 14, the upper larger compartment.

Q. Now, freezing compartment?

A. Freezing compartment is 12, but it could be stretched to include 20. 12 is a very small sleeve in the brine tank and 20 is the larger space.

Q. Are you sure it's 20, or is it 13?

A. Oh, pardon me. 13 is the space.

Q. Now, the thermal insulation, what is that?

A. Thermal insulation is 40 and 41, 38, 39, the material shown in the walls that surround the liner of the compartments.

Q. Well, what is the cooling refrigerant expander? [1276]

A. The cooling refrigerant expander must be the coil 25 in the cooling compartment 14.

Q. Do you find a finned coil or other frost-deterrent structure in the specification?

A. No. I find nothing of that sort.

Q. Do you see anything in the drawings, particularly Figure 2, which illustrates a finned coil?

A. No. This coil leads into a rectangle which might be a brine tank.

Q. What do you adopt as the freezing refrigerant expander, interpreting the claim?

A. That is the tube 22—the coil 22, which is in the brine tank.

Q. Now, what are the exposed surfaces or heat-conducting surfaces thereof?

(Testimony of Glenn Muffly.)

A. That would be the external surfaces of the coil 22.

Q. Now, volatile refrigerant?

A. Volatile refrigerant is the material circulated in the system. I don't believe it's specifically identified, but I know there must be such a refrigerant because there is an expansion valve. That indicates there is a volatile refrigerant.

Q. And what is a single liquefying unit?

A. That is the condenser 18 is the liquefying unit. If we expand that term and call it condensing unit it's this assembly in the machinery compartment 11. [1277]

Q. Now what is differential insulation?

A. That, I assume, refers to the insulation 39 as compared with 41, or 38 compared to 41, or 40 compared to 38.

Q. Now, what is said with regard to the placement of the temperature actuated motor controlling switch 31 with respect to the differential insulation?

A. It is in the compartment having the greater heating—heat link there into or thereto.

Q. Now—— A. The——

Q. Did I interrupt you?

A. The warmer compartment, and that is explained as having more heat in it.

Q. That is the compartment 14?

A. Compartment 14.

Q. Fine. Thank you. I wonder whether you would again look at the file wrapper.

(Testimony of Glenn Muffly.)

The Court: Look at what?

The Witness: The file wrapper.

Mr. Ramsey: The file wrapper that he was referring to. That is Plaintiff's Exhibit 101.

The Witness: Right.

Q. (By Mr. Ramsey): When was this application originally filed?

A. This was filed February 16th, 1931. [1278]

Q. Now, I ask you to refer to pages 8, 9, and 10, of the file wrapper. What is contained on those pages?

A. Those are claims.

Q. Are those the claims of the application as originally filed?

A. As originally filed, starting with Claim 1.

Q. We won't go through all of the claims, but can you summarize what these claims originally filed covered or attempted to cover or claimed or monopolized?

A. Well, Claim 1 is only two lines and that's—

Mr. Cuninghame: If your Honor please, I object. I think that's construction of a legal document, not for this witness, but for the Court.

The Court: I don't know what you want me to do about that.

Mr. Cuninghame: I think he should not be allowed to testify about the meaning of these claims. I don't think he is qualified.

The Court: Well, I held against you on that. I don't think this is a good time to start in on all these claims because we want to take a recess in a



(Testimony of Glenn Muffly.)

couple minutes. But I would like to ask you a question that has been bothering me.

Mr. Ramsey asked you whether a number of terms were defined either in the specification or in any other [1279] place in the patent. I would like to know, are those terms defined or similar terms ordinarily defined in the patent?

The Witness: Yes. The terms from the—he is comparing the terms used in the claims with the terms used in the specification, and he was asking me about the specification of the patent. I assume it's partly to identify what I understand each of those things to mean, what those words mean. There are some words used in these claims that are not common in the industry.

The Court: Oh. So it's your point, then, that some of these words that were used are not common in the industry and ordinarily are defined, and by reason of their not being defined you have to make certain assumptions?

The Witness: He wants me to define some words, I assume, yes. I have to, in reading the claims, determine what those words mean and it is a bit difficult; somewhat by a process of elimination I determine what they have to mean, the words in the claims.

The Court: Mr. Muffly, would a man who is a skilled refrigerator engineer be able to read those specifications and construct a box?

The Witness: From the specification he could construct a box as shown in the drawings, yes. He

(Testimony of Glenn Muffly.)

wouldn't need much guidance to take that drawing and make a cabinet and system like it. [1280]

The Court: And would that correspond with the claims?

The Witness: Not quite. That's one of the points, that the claims differ from the disclosure and in some respects are vague. I imagine that Mr. Ramsey was going to ask me something about——

The Court: Well, don't worry about what Mr. Ramsey is going to ask you. He will have that opportunity.

The Witness: All right.

The Court: I think that was something that was bothering me, and I thought perhaps it was bothering some of the jury, too.

So we will take a recess now for about ten minutes.

(Recess.) [1281]

Q. Mr. Muffly, have you asked me to have the Judge's questions repeated to you?

A. Yes, I have.

Q. Do you think you might have misunderstood his questions?

A. I would like to have one reread. He started out, "Could I build this refrigerator——"

(Discussion off the record.)

The Court: I think I said could a man who was skilled in the art, by referring to the drawings and the description, construct a refrigerator of the type

(Testimony of Glenn Muffly.)

constructed by Potter, or could he construct a refrigerator?

The Witness: Yes.

Mr. Cuninghame: That is, if Mr. Muffly knows, in his opinion, you mean?

The Court: Yes.

The Witness: Yes, and I said "Yes," to the question. The question was whether that was all of the question. I think that is right.

The Court: Then the next question I asked you, would it correspond with the claims in the reissue patent?

The Witness: Oh, then it was two questions, and that one I should have answered "No."

The Court: You did answer it "No" before.

The Witness: Did I? Well, then, I am all right.

The Court: You said that there were differences [1282] between——

The Witness: Yes, that is right; I said there was a difference. I was a little worried that that one question I had given the wrong answer to.

Q. (By Mr. Ramsey): There was another question the Court asked with regard to the specification and the words that appear in the specification—words of the claim, and he asked you, "Do the words of the claim," as I understood the Court's question, "have a definition basis in the specification?"

The Court: No, I did not ask him that question. I asked him whether the words that you asked him originally with reference to whether or

(Testimony of Glenn Muffly.)

not there were definitions in the specifications, and I said to him, "Are those words ordinarily defined in patent applications?" That is the question I asked him.

The Witness: They should be defined in the specification, and some I said were not entirely clear, words in the claims that are not in the specification.

The Court: The question was, are they ordinarily defined in patent applications, and what is your answer to that?

The Witness: Well, they should be defined in the specification in order to use them in the claims.

The Court: All right. [1283]

Mr. Cuninghame: May I ask if those are the terms he has listed like air in the freezing compartment that should be defined in the claims or in the specification, things like that, or just plain air?

The Witness: No, they referred to things like the word "expander," is an example.

The Court: Is your answer that some of the words used by Mr. Ramsey should have been defined and others are well known to persons in the art?

The Witness: Yes; could easily be determined, or there might be a difference of opinion between attorneys as to whether or not they should be, anyway.

The Court: What about the word "air" in the compressor or expander? What was the phrase that you used, Mr. Cuninghame?

(Testimony of Glenn Muffly.)

Mr. Cuninghame: Well, your Honor, the simplest one is "air," plain air, a-i-r.

The Court: The word "air" standing alone does not need to be defined in the patent application?

The Witness: I can't answer it from a legal angle, but I would know what it meant if I read it in the claim.

The Court: In your opinion, it needed no definition?

The Witness: The word by itself, I would understand it to mean air in the space concerned. Of course, if it referred to air temperature, I would assume it meant the [1284] air in that space.

Mr. Ramsey: The question, if the Court please, went to certain kinds of air, humid air or temperature air or maintained air.

Mr. Cuninghame: Or relative humidity of air is one that I copied carefully. Now what is relative humidity of air?

The Court: Go ahead.

Q. (By Mr. Ramsey): Turning to Page 8, we were looking at some—that is of Defendants' Exhibit 101—we were looking at some of the typical claims. We were looking at the claims he originally submitted. You commented on Claim 1 and read it.

The Court: He did not read it.

The Witness: I was suggesting I read that because it was the shortest.

Mr. Ramsey: Read Claim 1.

A. Claim 1 reads:

"A refrigerator having a freezing compartment,



(Testimony of Glenn Muffly.)

and a cooling compartment thermally separated from said freezing compartment.”

Q. Next, skipping down, oh, say, to the fourth claim, how does that read?

A. That reads:

“A refrigerator having a cooling compartment, a freezing compartment thermally separated [1285] from said cooling compartment, expansion coils in each of said compartments connected in series, a means for controlling the admission of refrigerant to the coil of said freezing compartment.”

Q. Now the seventh.

A. Claim 7 reads:

“A refrigerator having a combination cabinet in which is formed a pair of thermally separated compartments, each of which is provided with an expansion coil, said coils being connected in series, means for regulating the admission of refrigerant to the coil in the freezing compartment, a heat-pumping unit connected to the discharge end of the cooling compartment coil, and a temperature-actuated control switch for said pumping unit disposed within said cooling compartment.”

Q. Do you think those are typical of the remainder?      A. They are.

Q. Now turn over to Page 13 of the file wrapper. What is that?

A. That is an office action mailed October 8, 1931, paper No. 2. It is a rejection. The claims are all rejected, citing a reference, “Davenport 1,731,711.”

(Testimony of Glenn Muffly.)

Q. Next, turning over—no, remaining at that same page, [1286] how did the applicant then, Potter, attempt to distinguish over Davenport? What did he say? Would you read that? It is short.

A. Going to the reply?

Q. That is on Page 13.

A. Starting on—that would be Page 14 where the reply comes.

Q. Pardon me; yes, it is 14, yes.

A. In response to this paper dated October 8th, the remarks?

Q. Yes; can you summarize, though, to save time?

M. Cuninghame: I object, your Honor.

Mr. Ramsey: Read them all.

Mr. Cuninghame: I do not want it colored.

The Witness: Read them directly?

Mr. Ramsey: Yes.

A. Under the heading of "Remarks:"

"The examiner states that 'what the applicant refers to as his cold storage compartment corresponds to the space between the evaporator 4 and the walls of the compartment C of Davenport.' "

Now, it continues, the examiner talking now——

The Court: No.

The Witness: Or, no, the attorney talking, pardon me:

"The attention of the examiner is respectfully [1287] called to the fact that Davenport is claiming 'a process of holding over the low temper-

(Testimony of Glenn Muffly.)

ature in the freezing element which comprises utilizing the surface condensation of the other to form a coating of frost on the freezing element'—whatever that may mean. It is certain, however, that this suggests the formation of a coating of frost on the freezing element. Nothing could more clearly differentiate the two inventions than this simple statement, since the applicants have, by the arrangement which they are claiming, eliminated this very condition."

Q. Now what happened thereafter?

Mr. Cuningham: If your Honor please, he has cut him short. There is much more to it including the signature at the end. Let us see whose representation this is.

Mr. Ramsey: Is it not the attorney for the patentee?

Mr. Cuningham: It is the attorney at that time who was substituted because he did not understand the invention.

The Court: There is nothing in the record to that effect.

Mr. Ramsey: I object to that and ask that that comment be stricken.

The Court: The jury is instructed to disregard the [1288] remarks. I think that the patentee is bound by the statements of his attorney. You can bind the plaintiff. Mr. Birkenbeuel can bind them.

Mr. Cuningham: May he continue?

The Court: Well, I think that it should be read. It does not have to be read by the witness. Do you



(Testimony of Glenn Muffly.)

want to read it yourself, or do you want to have somebody else read it? Under our rules, Mr. Ramsey, at any stage of the proceedings when you are conducting the examination you can read any portion of an exhibit. It does not have to be read at the time of introduction.

Mr. Ramsey: Fine; thank you. I think that the next might be pertinent and informative. May I read that? Counsel asked that I do. The next says:

“In the first place, they have provided three kinds of compartments, No. 14 which is a cooling compartment but not a freezing compartment, No. 13 which is a freezing compartment and in which are placed non-volatile foodstuffs, and the last a water-freezing compartment 12 in which only as much frost can form as results from water evaporation.”

This is—I am not reading now—this is described in the drawing and the specification as——

The Court: Mr. Ramsey, you cannot do that. If you [1289] are going to read, read. The witness is the only person who can testify.

Mr. Ramsey: “In the compartment 13, which is separated therefrom, the temperature is so low that the frost is in the form of a white powder, and it is impossible for this ever to gain access to the water-freezing compartment 12. In the compartment 14 there is condensation but practically no frost, and if it does form it is caught in the collector 28 and transferred to the receptacle 30 after which it is never again frozen.”

(Testimony of Glenn Muffly.)

Mr. Cuningham: I think we ought to have it all, your Honor.

Mr. Ramsey: I think that you may be able to do that. I do not mind reading.

“Most certainly Davenport does not suggest this in the patent cited, nor in any of his other patents with which the writer is familiar.

“It will interest the examiner to know that in spite of all work that has been done in refrigerating lines in the last decade it has remained for the applicants to evolve this highly desirable cabinet, which they are now engaged in placing on the market with most gratifying results. [1290]

“Without further entering into the various claims on which a reconsideration has been asked the Examiner’s attention is respectfully redrawn to the applicants’ statements of invention. If the Examiner will kindly point out a reference which more clearly discloses these objects than does Davenport, and better still a reference which discloses a means for attaining these objects, the applicants will be glad to withdraw their claims, but in the absence of a better showing a favorable action is solicited.”

Mr. Cuningham: Thank you.

The Court: “Respectfully submitted, Lewis J. Bronaugh, Thomas I. Potter, by their attorney, E. B. Birkenbeuel.”

Mr. Ramsey: Yes.

Following that solicitation on the part of the applicants’ attorney and referring to Page 16 of the

(Testimony of Glenn Muffly.)

file wrapper, what did the Examiner say? Following the Court's suggestion, I will read it to shorten the time. It refers to claims 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 and 14, "are again rejected as presenting no invention over the patent to Davenport, cited above. See the last Office action.

"Claims 5 and 10 are rejected on the patent to Davenport on the ground of old combination. Applicant has merely substituted [1291] a thermostatic expansion valve for Davenport's expansion valve. This substitution is not deemed to involve invention. The patent to Eddy is cited above for the purpose of showing the use of thermostatic expansion valves.

"Claims 2 to 14, inclusive, are rejected as reading directly on the patent to Hunt, cited above."

The Court: I think you can point out that the applicants themselves abandoned Claim No. 1.

Mr. Ramsey: Yes, that is right, they can, and it was abandoned.

Then skipping over to Page 24, do you find that? Page 24 is the——

The Witness: It is the end of the document.

The Court: I think we are opening up quite a bit if we read Page 24.

Mr. Cuninghame: That is the only statement by one of the patentees, I think, in here as distinguished from one by their attorney.

The Court: 24 is the statement by the attorney.

Mr. Ramsey: That is what I find.

The Witness: Then my 24 is——

(Testimony of Glenn Muffly.)

Mr. Cuningham: It is 23, your Honor, the way it is numbered here. [1292]

Mr. Ramsey: They were certified copies from the Patent Office, but the claims seemed to differ.

The Court: 24 is a letter from Mr. Birkenbeuel.

The Witness: Mine is different. 24 is a document ending signed by Mr. Potter.

Mr. Ramsey: Is that on Page 24 in the original exhibit?

The Witness: Page 24.

Mr. Ramsey: Letter from Birkenbeuel.

The Witness: It bears Mr. Potter's signature.

The Court: Is that the one you have?

Mr. Cuningham: Yes, your Honor, that is what I said. [1293]

The Court: Is that the one you have?

Mr. Cuningham: Yes, your Honor. That's what I said before.

The Witness: And——

The Court: You have a soft copy or certified copy?

Mr. Cuningham: I have a printed copy in the preceding litigation.

The Court: Well, I have a certified copy.

The Witness: I have a certified copy.

Mr. Ramsey: I have a certified copy.

Mr. Cuningham: And this is printed from the certified copy.

The Court: What were you asking about, a letter from Mr. Birkenbeuel?

Mr. Ramsey: That's correct.

(Testimony of Glenn Muffly.)

The Court: That's what mine is dated, October 5th, 1932.

Mr. Ramsey: That's correct.

In that letter his attorney writes Mr. Potter, then living in Buffalo: "Dear Mr. Potter: I hand you herewith a copy of Paper No. 4 in your application for a patent on a Refrigerator, Serial No. 516,032. The latest action in this case was taken on April 9th and I have purposely refrained from acting thereon as long as possible. I frankly believe that the Examiner is correct in his rejection on Davenport and do not see wherein our case could be improved by [1294] carrying this matter on further. I sincerely believe that there is nothing patentable in this case.

"The references in question are enclosed herewith.

"Yours very truly, E. B. Birkenbeuel."

Mr. Cuninghame: Now, we might as well read the next letter and the next and the next.

The Court: You can do that in your case, Mr. Cuninghame.

Mr. Cuninghame: All right, sir.

The Court: Anybody can refer to any portion of an exhibit that has been admitted in evidence.

Mr. Cuninghame: I should think that once he opened the subject he might——

The Court: Mr. Cuninghame, I'm running this case.

Mr. Cuninghame: I'm sorry, sir.



(Testimony of Glenn Muffly.)

The Court: You've been trying to run it ever since you got into this courtroom.

Go ahead.

Q. (By Mr. Ramsey): On my copy, page 25, is the next amendment. Does that correspond with yours?

A. Page 25 is an amendment received December 2nd, 1932.

Q. Yes. I direct your attention to Claims 15 and 16 on 25 and 26, and I will read the Claim 15 to you:

"A refrigerator comprising a cabinet formed with a dry, cold storage chamber and a relatively moist and warm cooling chamber thermally insulated [1295] from the cold storage chamber, a freezing coil in the cold storage chamber, a non-frosting coil in the cooling chamber, a line directly connecting said coils, and a heat pumping unit for drawing gasified refrigerant from the non-frosting coil and returning the same as a liquid into the freezing coil."

Have you examined the file, Mr. Muffly? First, is that or is that not a first reference to a non-frosting coil up to December 2, 1932?

A. Yes. That's the introduction of that term.

Q. Claim 16 is very similar and does that or does not that refer to a non-frosting coil?

A. Yes, that refers to a non-frosting coil in Line 5.

Q. And both of those were submitted to the patent office for the first time on December 2, 1932?

(Testimony of Glenn Muffly.)

A. Correct.

Q. Now, referring to page 28, Lines 3 to 16, on this subject of non-frosting coils:

“As is well known the non-frosting coils do not collect frost”——

this is a part of the amendment on the amendment filed to support these claims 15 and 16——

“As is well known the non-frosting coils do not collect frost because the vanes cannot carry off heat fast enough to be cooled much below the [1296] temperature of the air surrounding them. If the temperature of the vanes is, for instance, 38 or 36° Fahrenheit, and the average temperature of the air in the compartment is 40°”——

The Court: “In the chamber.”

Mr. Ramsey: “In the chamber is 40° Fahrenheit, moisture will be precipitated upon the vanes until the moisture remaining in the air corresponds to the saturation point at 36° Fahrenheit, which is little below that”——

Mr. Cuninghame: “But little.”

Mr. Ramsey: “But little below.”

“This moisture is not abstracted from the chamber and some of it is actually picked up by the air. At all events the air and the chamber has far more moisture than it would be if it were circulated against a freezing unit maintained at a temperature below 20° Fahrenheit.”

So that was the argument in support of Claims 15 and 16.

Next, referring to——

(Testimony of Glenn Muffly.)

Mr. Cuninghame: Is there a question, your Honor, on these?

The Court: I don't know. What is the question you are asking Mr. Muffly? [1297]

Mr. Ramsey: These are all in the basis of an argument made a little later and I must refer to these portions and the arguments and the later submitted claims so that my questions will make sense.

The Court: All right. Where do you want to read from now?

Mr. Ramsey: Referring to page 30, the last paragraph:

"Claim 4 distinguishes from Hunt because it calls for two compartments one being a freezing compartment and the other a cooling compartment with expansion coils in each of the compartments connected in series. This series connection is not found in the Hunt patent. As for the Davenport patent the evaporator 5 is not a coil and it is impossible with Davenport's construction to obtain the results which applicants obtained with their non-frosting coil in the cooling chamber."

Mr. Cuninghame: "Cold coil."

Mr. Ramsey: "Non-frosting coil." Is that wrong?

Mr. Cuninghame: Yes. "Cold coil."

Mr. Byron: "Coil" in mine.

Mr. Ramsey: "Coil" in mine.

The Court: No. He is reading it correctly, Mr. Cuninghame.

Mr. Ramsey: "Applicants obtained with [1298]"



(Testimony of Glenn Muffly.)

their non-frosting coil in the cooling chamber." Is that the way yours reads?

"Reconsideration of claim 4 is requested."

The Court: You read it correctly.

Q. (By Mr. Ramsey): Are you familiar with the Hunt patent and the Davenport patent?

A. Yes.

Q. Are you familiar with them? A. Yes.

The Court: He has already answered he is.

Mr. Ramsey: I didn't hear.

I wonder if you could step down to the black-board so that this argument will be understood by the jury and see what the attorney is saying at this point. Could you use the other side of the board? The reference at this stage is to the Davenport patent. Do you have the patent to work from? A. No.

Mr. Byron: He has got a copy of the Davenport patent.

The Witness: Davenport patent? I have that.

Mr. Byron: 1,731,711.

The Court: What are you going to have him do, draw the Davenport patent?

Mr. Ramsey: A portion of it so that it will make—be intelligible to the jury what we are contending at this point, [1299] if you can do it quickly.

The Witness: This is 1,731,711, Figure 1 of it.

The Court: Mr. Ramsey, this man is your witness. You can ask him the ultimate question, then if Mr. Cunningham doesn't agree with him he can subject him to cross-examination and make him do

(Testimony of Glenn Muffly.)

anything he wants. But he doesn't have to go through all this as your witness. Maybe Mr. Cunningham will agree with him.

Q. (By Mr. Ramsey): Can you tell us what the Davenport patent does disclose, the pertinent portions?

A. It discloses a refrigerator described for domestic use with a freezing compartment in the bottom partially above and at one side of the condensing unit a flow is through an expansion valve.

Q. Pardon me. I have a rather good idea. We have that all drawn out in Plaintiff's Exhibit 114-L. I wonder if we could have that and then that will shorten it up a lot.

The Witness: Yes.

Mr. Ramsey: It's a big chart. I wonder whether it would be helpful, I have some miniatures of these charts.

The Court: I think the jury can see this.

Mr. Ramsey: Can they?

The Court: Yes. If they can't see we will bring it up a little closer.

The Witness: This is what we are going to look at. [1300] Would you like it a little closer?

Q. (By Mr. Ramsey): Now, the thing that I am just reminding you, Mr. Muffly, the remarks of the applicant at this stage are as to the Davenport patent:

"As for the Davenport patent the evaporator 5 is not a coil and it is impossible with Davenport's construction to obtain the results which applicants

(Testimony of Glenn Muffly.)

obtained with their non-frosting coil in the cooling chamber.”

Now, just limiting that definition——

A. The Davenport patent shows the condenser over here (indicating), tube going over here to the freezer (indicating) coming into the expansion valve, and then coming up through an evaporator. 5 is the evaporator and it's merely a double line on the back wall of the cabinet. You wouldn't know there was an evaporator there because it's merely a double line. And 5 is the identifying number, and that refers to a sheet metal evaporator that covers the entire back wall of the refrigerator.

As we look in the front of the refrigerator this 5 points over to the back wall. That is the evaporator which cools this upper compartment.

Q. Is that the cooling compartment?

A. That is the cooling compartment.

The lower compartment is the freezer. Figure 16 [1301] appears in it.

Mr. Byron: 3 is the freezing chamber?

Q. (By Mr. Ramsey): Can you see from the drawing?

A. Letter C. C is the freezing chamber, and that refers to the space in which these items are located. From there the refrigerant goes up through this large flat evaporator that covers the back wall of the main food compartment or cooling compartment.

Q. (By Mr. Ramsey): Now, is that a cold-wall refrigerator type?

(Testimony of Glenn Muffly.)

A. That is close. It's a bit different because this is actually inside of the compartment B, the warmer compartment. The cold-wall type would more properly refer to the other Davenport patent alongside it.

Q. What number is that?

A. That's 1,726,344.

Q. Would you explain that very briefly?

A. Well, the evaporator 5 is actually within the compartment B being placed inside of the compartment, whereas the evaporator shown by the dotted line GE Sub A—and I think the general—no capital E—this evaporator that cools the main food compartment in the 1,726,344 Davenport patent has a coil outside of the compartment between the liner and the insulation, and that would be strictly a cold-wall type.

Q. Now, the only point made at this stage is, he says that [1302] the Davenport Patent No. 1,731,711 that the evaporator 5 is not a coil and it is impossible with Davenport's patent to obtain the results which applicants obtained with their non-frosting coil in the cooling chamber.

A. That's not correct. You can do anything with the sheet metal evaporator that you can do with a coil.

Q. No. I'm asking, is that——

A. Oh, yes.

Q. ——is that the contention that he is making?

A. The contention he made. I thought you were asking me if his contention was correct.

(Testimony of Glenn Muffly.)

Q. Let's see, then, you might take your seat again, Mr. Muffly, if you will, and look at page 48. Now, this is dated January 29, 1934, and this is where the long insert that you discussed was put in about differential insulation. A. Right.

Q. Is that correct?

A. That's correct. [1303]

Q. Is that correct? A. That is correct.

Q. And the claims that follow on Pages 52, 53, 54, 55 and 56 are directed to the subject matter of this added portion of the specification?

A. Yes.

Q. Referring to Page 57, do you find that?

A. Yes.

Q. And reading just the first paragraph to you:

“At said conference—” which is some time prior to the date of this amendment—“At said conference mention was made of the patent to Anderson, No. 1,439,051, issued December 19, 1922, and it is requested that this patent be made of record in the present case. The Anderson patent shows a cabinet with two refrigerating chambers therein, one of which is adapted to be maintained at a much lower temperature than the other. In Anderson's low-temperature chamber there is an open coil adapted to support ice trays. Anderson does not provide a cold storage compartment and a freezing compartment as separate chambers, but in order to avoid any possible confusion as to the scope of Claim 2 this claim has now been amended to state specifically [1304] that the cold storage compartment



(Testimony of Glenn Muffly.)

is separated from although thermally connected to the freezing compartment.”

Is this the first reference in the file history, file wrapper, to the Anderson patent?      A. It is.

Q. That was in the amendment of January 29, 1934?      A. Yes.

Q. When he added all of this long insertion to the specification.

Next, directing your attention to a little further down on the page when he is arguing about Claim 15 which is newly inserted, and he says, “Claims 15 and 19 avoid the Anderson patent in calling for a non-frosting coil in the cooling chamber.” Is that correct?

A. That is correct, the word “for” instead of “in,” calls for a non-frosting coil in the cooling chamber.

Q. Yes, that is correct. Now, next referring to Page——

The Court: Are you asking him whether the statement is correct, whether you read it correctly, or whether that is true?

Mr. Ramsey: No, he corrected my reading of it, and at least I thought he did, and I said——

The Court: Mr. Ramsey, when you asked Mr. Muffly a question were you just asking if you read the statement [1305] correctly or whether the statement is correct?

Mr. Ramsey: No, I did not ask him the latter. I will come to that, if the Court please, where it gets down into more exact definitions.

(Testimony of Glenn Muffly.)

The Court: Very well.

Mr. Ramsey: Next referring to the file wrapper Page 70, and this is the point, if the Court please, where——

The Court: Go ahead.

Mr. Ramsey: Yes, this is an argument made by the applicant under date of March 6, 1936, to an action, Office action of September 7, 1935, in which the Examiner holds to a rejection on the Anderson patent, and starting at the top of Page 70 the attorney for applicant states as follows:

“Examiner naturally assumes that because one of the chilling elements is immersed in water the chamber which it chills must be maintained at a temperature above the freezing point. This is very true, but it does not mean that the surface temperature of the chilling element would be maintained above the freezing point if there were no water present. In actual practice, such elements gather frost were they not immersed in water.”

Stopping the quote at that point, as an expert, Mr. Muffly, would this be true, any evaporator or any cold [1306] surface that is immersed in water would be non-frosty?

A. The surface immersed in water might collect ice, not frost, and the question of whether or not it collected ice would depend upon its temperature.

Q. But then it would not be water; it would be ice that covered it?

A. It would then have a coating of ice.

(Testimony of Glenn Muffly.)

Q. Going on with the quote:

“In actual practice, such elements would gather frost were they not immersed in water. As distinguished from these soda water cabinets, applicants have produced a refrigerator adapted for household use and containing at least two thermally separated chambers which in the new claims are termed ‘air chambers’ to distinguish them from liquid-containing tanks. Applicants’ invention comprises a refrigerating system in which one chamber is maintained at a temperature well below 32 degrees F., and another chamber maintained at a temperature above this point, and the chilling unit in the latter chamber operates at a surface temperature that is above the freezing point so that no frost will collect thereon to rob the air of the chamber and the foods therein of moisture,” [1307] breaking the quote at that point.

He is now limiting claims on non-frosting to those exposed to air?

Mr. Cuninghame: I object.

The Court: Objection sustained. That is a leading question, Mr. Ramsey. Are you making a statement to the jury, or are you asking Mr. Muffly a question?

Mr. Ramsey: No, I was asking this witness an interpretation of the language.

The Court: I sustain the objection. It is a leading question.

Q. (By Mr. Ramsey): Then assuming that claim, Mr. Muffly, defines a cooling element **in which**



(Testimony of Glenn Muffly.)

a surface temperature is exposed to air and that that would occur in a claim, would that limit the claim to that language?

A. Yes, that would be a limitation of the claim.

Q. Reading on:

“This inventive thought is not disclosed in any of the references cited. In the patent to Davenport, No. 1,731,711, for instance, it is definitely stated that the element 5 in the chamber B becomes frosted during operation of the refrigerating system and defrosts itself during the periods when the machine is cut off”—breaking at that [1308] point.

Following that interpretation in claim, would such language be limited to non-frost evaporators rather than frost-defrost types?

Mr. Cuninghame: If your Honor please, I must say I do not understand the questions.

The Court: Neither do I.

Mr. Cuninghame: I do not think anybody does.

Mr. Ramsey: The point of the question, if the Court please, is that at this stage this applicant has been driven—he first presents claims for a non-frosting evaporator, that is, one that does not collect frost, and he is distinguishing at this point between those that will not frost and those that will frost and defrost during an operating cycle, and that was the point of my question to this witness.

The Court: Do you understand what he means?

The Witness: Yes; I think I ought to have the

(Testimony of Glenn Muffly.)

question read back, but I know what he is talking about. I can answer it.

The Court: What is he talking about?

The Witness: This sentence that he has read refers to a situation where the evaporator becomes frosted during operation of the system that is on an on-cycle, and it defrosts itself during the periods when the machine is cut off. That is what we call a frost-defrost cycle or a self-defrosting [1309] cycle. The surface loses its frost each time the machine stops, so you gather some frost and lose it and gather it and lose it, but you do not necessarily have to do any defrosting job.

The Court: What does he say about that, that that was disclosed in Davenport, that frosting and defrosting?

The Witness: Let's see (reading document). He is saying that Davenport does disclose that sort of a device; that Davenport, for instance, it is definitely stated that the element 5 in the chamber B becomes frosted during operation of the refrigerating system and defrosts itself during the periods when the machine is cut off.

Mr. Cunningham: That is true, isn't it? That is what Davenport says?

Mr. Byron: Wait. Who is examining here?

The Court: Does he distinguish the patents—the invention which he claims from Davenport?

The Witness: That is his purpose in this argument, yes.

(Testimony of Glenn Muffly.)

The Court: What does he say that Bronaugh and Potter do differently than Davenport?

The Witness: He says on Page 71 near the top, continuing the argument:

“It will thus be apparent that Davenport not only fails to disclose the idea of maintaining [1310] humidity in his food chamber to prevent of drying out of foods but actually provides special means for getting rid of this moisture.”

The Court: In other words, does he contend that in Bronaugh and Potter the chilling unit operates at surface temperature, and is that how he distinguishes it?

The Witness: Yes, on down to Page——

Mr. Cuninghame: They both operate at surface temperature, your Honor. I do not understand.

The Court: Go ahead.

The Witness: In talking of this claim, he has a new claim, 36, “The claim is more specific than certain claims previously canceled because it specifies air chambers and also specifies a fixed lower limit of operating temperature at the surface of the chilling element.”

The Court: What does that mean?

The Witness: That the contact with air is at above the freezing point so it cannot collect frost.

The Court: So he says that Davenport provides a mechanism by which the cycle goes on and off in order to prevent frosting, in order to minimize frosting?

The Witness: Yes.

(Testimony of Glenn Muffly.)

The Court: But in Bronaugh and Potter there is nothing frosting because the chamber is maintained at a temperature which is above freezing? [1311]

The Witness: Well, he is arguing that the surface is maintained above freezing. The chamber would always be warmer than the surface that cools it, so the chamber would be above freezing and still the surface go below freezing.

The Court: In general, is that how he distinguishes Davenport?

The Witness: Yes, he is arguing that Davenport is a frost-defrost cycle, a frost-defrost in the regular stop-and-start cycles of the refrigerator.

The Court: Go ahead.

The Witness: Whereas, he just does not collect frost.

Q. (By Mr. Ramsey): Now, further on that subject, I ask you to refer to Page 73 which is a Patent Office action dated May 6, 1936, and this subject of non-frost is again brought up and follows a record of rejection by the Patent Office. In this action of May 6th the Examiner states, and I quote:

"Claims 5, 7, 16 and 32, previously found to be allowable, are finally rejected as reading directly on the patent to Anderson, of record. These claims each recite a combination consisting of the following elements:

(A) A two-compartment refrigerator, [1312] each compartment being insulated from the other;



(Testimony of Glenn Muffly.)

(B) A motor-compressor unit outside of these two compartments;

(C) An evaporator in each compartment, one evaporator adapted to operate at a freezing temperature and the other adapted to operate at a higher temperature;

(D) A pipeline serially connecting the compressor and two evaporators;

(E) An expansion valve in the pipeline in advance of the first evaporator;

(F) A thermostat in the compartment housing the higher temperature evaporator for operating a switch in the motor circuit.

All of these elements, but (F), are clearly shown in Anderson's Fig. 1. However, Anderson in Lines 91 to 106 on Page 1 of his patent, states that he may make use of a thermostat in his higher temperature compartment for controlling his motor."

Then next referring to—and here is where I want to comment, Mr. Muffly—Pages 82 and 83, at the middle of Page 82, this is an argument supporting new claims, attempting to define over the old claims that [1313] were rejected and made by the applicant, that is, the persons that are trying to get the patent, and it goes to the question of this Anderson patent which has had this jury's consideration, and I read to you, Mr. Muffly:

"Before proceeding with a discussion of the references above listed, we would point out in what manner the new claims distinguish from the patent to Anderson, No. 1,439,051, on which Claims 36



(Testimony of Glenn Muffly.)

to 39, inclusive, were rejected. The withdrawal of these claims is not to be construed as an admission that they are met by the Anderson patent. They have been replaced by the new claims so as to put them in better form and so as to avoid the new references, as will be explained hereinafter.

“The Anderson patent shows two chambers insulated from each other and from the outside atmosphere, with a chilling unit in each,”—breaking the quote.

Is that also true, Mr. Muffly, in the patent in suit?           A. It is.

Q. Next sentence:

“However, nothing is said in the Anderson patent regarding the surface temperature of the [1314] chilling unit in the warmer chamber.”

That is also true in the patent in suit as far as the specification is concerned?           A. Yes.

Q. Next quote:

“It has been common practice prior to applicants’ invention to cool a chamber to a low temperature well above the freezing point with a chilling element whose surface temperature is well below the freezing point, and the natural inference is that Anderson’s upper coil has a surface temperature below the freezing point. Certainly there is nothing in his specification to teach the contrary. Furthermore, Anderson’s chilling units are connected in series, and no means are provided for maintaining a different pressure in the two chilling units.”

Is that true in the patent in suit?

(Testimony of Glenn Muffly.)

A. That is also true in the patent in suit. [1315]

A. That's also true in the patent in suit.

Q. Continuing the quote: "or for forming the upper chilling unit with a broad heat-absorbing surface." Now, breaking the quote. Is there anything in the patent in suit defining a "broad heat absorbing surface"? A. No.

Q. Going on with the quote:

"Such as would prevent the formation of frost thereon. It will be obvious to anyone skilled in the art that the coils in Anderson's warmer chamber must have a surface temperature below the freezing point either throughout the length of the coils or through a substantial extent thereof for if Anderson's apparatus were so arranged that all the refrigerant were evaporated in the lower chilling element there would be little cooling effect left in the completely vaporized fluid passing up through the upper coil."

Is that also true in the patent in suit?

A. It is.

Q. Continuing the quote:

"Certainly not enough to cool the large upper food chamber adequately particularly since the latter chamber is the one most frequently [1316] used and is constantly being opened for introduction of food therein."

Is that also true in the patent in suit?

A. It is.

Q. Continuing the quote:

"Or the removal of food therefrom hence it will

(Testimony of Glenn Muffly.)

be apparent to anyone skilled in the art that Anderson's coils in the upper chamber must be maintained at a surface temperature below the freezing point of water."

Is that also true in the patent in suit?

A. It is.

Q. Next:

"The fact remains that Anderson does not anywhere in his specification teach the invention disclosed in the present application."

Is that also true in the patent in suit?

A. It is.

Q. Next, going on in this same amendment where he is called upon to distinguish over other patents. Going to the middle of page 84 and reading the patent of Davenport—do you find that?

A. Yes.

Q. And you have been discussing the Davenport patent in connection with the exhibit that still is before you, [1317] Plaintiff's Exhibit L. I will read this to you:

"The patents to Davenport, Nos. Re. 17,078, 1,769,112 and 1,769,117, are cited because they disclose constructions which might be arranged to produce applicants' effect of sharp freezing in one chamber and cooling in another chamber without dehydration below 100 per cent humidity at 32 degrees Fahrenheit."

Is that the same result that they contend for? Is that the same thing they contend for as a result in these claims in suit?

(Testimony of Glenn Muffly.)

A. Yes.

Q. Next following:

“However, to obtain this effect Davenport has been obliged to use a combined vapor and gas refrigerating system. In Reissue 17,078, for instance, there is a single chilling element through which volatile fluid and a noncondensable gas are passed. In order to distinguish clearly from the Davenport construction, the new claims all call for a refrigerating system employing a volatile fluid as the sole refrigerant therein.”

Can you explain that to the jury, the difference between what he is trying to say about the Davenport construction Reissue 17,078? [1318]

A. Davenport used an evaporative refrigerant and he put some air or non-condensable gas, something that did not evaporate, mixed it in to help stir it up so it would evaporate more readily. And that is the distinction between those patents. Davenport had a single evaporative refrigerant and in addition he had some air, and the air in that case was not used as a refrigerant. So I would say that there is still one refrigerant and that one was evaporative.

Q. And in this structure which the applicants describe at this point is it your understanding from reading this that he admits that Davenport can have a cooling chamber having high humidity or moist cold, but he claims that the difference is that Davenport uses two refrigerants or one volatile re-



(Testimony of Glenn Muffly.)

frigerant and air, while he uses only a volatile refrigerant?

A. Yes, that's the distinction he is drawing.

Mr. Cuningham: As you understand it?

Mr. Byron: Wait a minute. Wait a minute. That's not called for.

The Court: That's right. He is just expressing his own opinion. How long are you going to continue with this line of interrogation?

Mr. Ramsey: We are close to the end of the file wrapper but, as in all file wrappers, when an applicant is required to sharpen and sharpen and define and define——

The Court: Mr. Ramsey—— [1319]

Mr. Ramsey: Excuse me.

The Court: ——I just asked you a simple question. Page 66 ends the representation by Bond on behalf of Potter and Bronaugh. Do you propose to go further than that or stop there tonight? It's 4:30 now.

Mr. Ramsey: We can stop. It may be, I would say, possibly a half hour to get through the remainder of the distinctions that he makes.

The Court: Well, the distinctions which Mr. Bond makes on behalf of the Potter and Bronaugh?

Mr. Ramsey: That is correct.

The Court: Earlier today you read Mr. Muffly some statements, asked him if they were contained in the file wrapper, and then you indicated that you were going to ask him a question on it. I haven't



(Testimony of Glenn Muffly.)

heard the question yet. It was one involved at page 31, starting at the bottom of page 30:

“As for the Davenport patent the evaporator 5 is not a coil and it is imposible with Davenport’s construction to obtain the results which applicants obtained with their non-frosting coil in the cooling chamber.”

Now, you asked him if that was a correct statement, if you read it correctly, and he said you did. Are you going to ask him if that statement is true or not?

Mr. Ramsey: The witness thereafter defined by reading [1320] from the patent what that meant. These are only representations and representations against interest that I am asking the witness to describe and interpret. Limiting factors.

The Court: Well, maybe tomorrow you had better ask him that again because I didn’t understand it.

On page 51 you said something about the difference in insulation. Mr Muffly, was that the first time that the different widths or sizes or quantities of insulation were disclosed?

A. In the specification, yes.

The Court: Was it shown in the drawings?

A. The drawings show, as I pointed out, some thicker areas of insulation.

The Court: But, this was the first time it was shown in the specification?

A. The first time it was put into the specifica-

(Testimony of Glenn Muffly.)

tion. The drawings, I think I pointed out on the larger chart, show some thicker areas.

The Court: And did the claims claim a difference based upon different sizes in the insulation?

A. Not to start with. Those came in later after the broader claims were finally rejected, and this additional material had been inserted in the specification.

The Court: All right. Well, I am just trying to ask questions that bothered me and I assume that when I don't [1321] understand something most likely the jury doesn't understand it either.

I think this is a good time to quit.

Ladies and gentlemen of the jury, I am still hoping that this case will be through by Thursday night and I think you can assume that the case will be over in any event this week, and you are now excused until tomorrow morning at 9:30.

(Whereupon the jury was excused.)

(The following proceedings were had out of the presence of the jury:)

The Court: Mr. Ramsey, how long do you propose to interrogate Mr. Muffly?

Mr. Ramsey: I think that I can get through within a day; that is, through tomorrow morning. We are through the file wrapper and we have all our comparison charts to go through and explanation of the accused devices. It will go faster but it does take time.

The Court: Well, the only thing I suggest is don't waste any time.

(Testimony of Glenn Muffly.)

Mr. Ramsey: I'll try not to.

The Court: Recess until 9:30 tomorrow morning.

(Whereupon, at 4:30 o'clock p.m. an adjournment was taken until Tuesday, November 29, 1955, at 9:30 o'clock a.m.) [1322]

Tuesday, November 29, 1955, 9:40 A.M.

(The trial herein was resumed, pursuant to adjournment, and further proceedings herein were had as follows:)

### GLENN MUFFLY

a witness produced in behalf of Defendants, thereupon resumed the stand and was examined and testified further as follows:

#### Direct Examination (Continued)

By Mr. Ramsey:

The Court: Mr. Ramsey?

Mr. Ramsey: I wonder if we might have Exhibit 114 put on the easel and brought closer to the jury so they can read it.

(Exhibit referred to produced before jury.)

Mr. Ramsey: Will you please give the witness Exhibit 114-A.

(Discussion off the record.)

(Testimony of Glenn Muffly.)

The Court: Mr. Cuninghame, do you have a copy of this?

Mr. Cuninghame: I do, sir, but I left it at the office this morning.

Mr. Cheatham: Your Honor, I have sent for them, and they will be here shortly.

Mr. Ramsey: May I loan you one, Mr. Cuninghame? [1323]

Mr. Cuninghame: Thank you very much.

The Court: Mr. Cuninghame, do you have any objection if a few copies are given to the jury so that they can follow?

Mr. Cuninghame: Well, if they have a copy of the patent, if a copy of the patent is given them at the same time, your Honor, I would have no objection.

The Court: I mean just to be able to follow Mr. Muffly. If these two people were given one and then there were a few of the others, perhaps three or four persons would be given copies, and then they would be able to pick it up immediately after.

Mr. Cuninghame: If your Honor please, this chart contains legends and statements not included in the patent. It purports to be, and probably is, an accurate copy of the patent claim, but it is subdivided into various elements according to this witness' ideas, I suppose, or somebody else's idea. I think that it would be absolutely necessary for a fair presentation to enable the jury to compare this chart with all its unusual and extraneous legends with the claim of the patent in suit. Now, I would

(Testimony of Glenn Muffly.)

be equipped to supply, I hope, sufficient copies of the patent in suit to accompany copies of the chart.

The Court: Mr. Cuningham, the only suggestion I made was to permit the jury to better follow the remarks of [1324] Mr. Muffly. I do not want them to take this document home with them and study it, nor do I want them to take the patent in suit or the Admiral patent, if they have any, home to study it. The only suggestion I made was that they be given three or four copies, because of the fact that the chart, which is identical to the copies that I have in my hand, is so small that they might have difficulty reading it.

Mr. Cuningham: I understand that, sir.

The Court: I just want them to be able to understand it better.

Mr. Cuningham: I do understand that, sir, but my point is, and I am sure I have not made myself clear, this is not a correct representation of the patent.

The Court: You will be able to put on your case—very well, there is an objection so we cannot do it.

Mr. Ramsey: Referring to Exhibit 114-A, what does this show, Mr. Muffly?

The Witness: This shows to the left the drawing of the Admiral refrigerator—

Mr. Cuningham: If your Honor please, apparently there is some dissension in our ranks. I will withdraw any objection to showing that chart, and



(Testimony of Glenn Muffly.)

I will expect to offer the patent in our case. Is that what your Honor suggests?

The Court: Yes.

Mr. Cuninghame: I am so sorry. I [1325] misunderstood.

The Court: You may offer anything you want. Just give about six copies, give those to the two alternate jurors. They seem to have the most difficulty in seeing.

Mr. Ramsey: If the Court please, I only have two besides the one I loaned Mr. Cuninghame.

(Discussion off the record.)

Q. (By Mr. Ramsey): What does that show, Mr. Muffly?

The Witness: At the left is a view of an Admiral refrigerator. At the right is a copy of the drawings in the patent in suit.

Q. I notice that there are colors on the chart. What do they signify?

A. These colors signify the refrigerant circuit in the patent in suit. You can see red to indicate the condenser portion of the system and green up above to represent the cooling portion of the system. The red part is, the heat is disposed of here. Here is where it is picked up. That is the cool end in the same way you have red to indicate the condenser in the base. We have green to indicate the evaporator that surrounds the freezer. We have other colors, namely, yellow and blue, to indicate the secondary system which also has a condenser

(Testimony of Glenn Muffly.)

indicated by yellow and an evaporator indicated by blue, there being four colors here, two colors in the patent in suit.

Q. In the middle there is something called "Claim 2 Bronaugh-Potter [1326] Reissue 23058." It has been agreed that that is probably the broadest claim in this patent in suit. It is broken down into numerals on the left-hand side. What do the numerals represent?

A. They represent elements of the claim starting with Figure 1 at the top appearing on both sides, a cabinet, and the lead line points to the left of the Admiral cabinet and to the right, No. 1, is the Potter cabinet.

Q. You explained yesterday the refrigeration circuit of the patent in suit. Would you briefly go over the refrigeration circuit in the Admiral refrigerator?

A. In the Admiral we have the motor compressor in one element, in the sealed unit of today, that discharges high-pressure refrigerant into the condenser which is the red-colored part in the base of the cabinet, and from that a tube leads upwardly through the insulation, and at the outlet end of that tube it becomes green. That tube is a restricting device that reduces the pressure, so here we have low-pressure refrigerant entering the evaporator coil of the freezer. That is a coil that is wrapped around the liner of the freezing compartment.

That refrigerant also may pass through, may be passed through the green portion along with the

(Testimony of Glenn Muffly.)

dotted lines on this rectangular plate below the freezer and shown above the main food compartment, so you can see it. That is the [1327] primary evaporator that is used at times as required to cool the condenser which we see below it in yellow, and that is the condenser of the evaporator shown in blue which is around the main food liner, the cooling compartment liner.

Q. I wonder whether we might have the secondary liner, Defendants' Exhibit I think it is 114-A. It is 117, Defendants' Exhibit 117.

(Exhibit referred to produced.)

Q. You were explaining how the coils of the secondary surround the liner. Would you point to it?

A. Yes, I will try to. Now, a few of these blue coils we see here are back of the liner, and here we are looking at the back side of this liner, and you see these coils that have been protected with this paper because of the mastic composition of this material with which they are pasted up against the liner, and they run around the side across the back. There is a tube in the center that is painted red and runs down. That is this one (indicating). It is green on here. It comes down from the secondary condenser. Liquid flows down each evaporator and up and is condensed in this (indicating). This secondary system is the arrangement of tubing which we see attached to, mounted on the line of the Admiral refrigerator, and you are now looking at the

(Testimony of Glenn Muffly.)

rear side of that liner, and this plate is at the top of the back of the liner, is indicated in the drawing by the rectangle [1328] on which we see the yellow tubes representing the tubes that are hidden by this. Right back of this next to the liner then, that is the condenser which condenses refrigerant because of being cooled by the primary which is very cold, condenses liquid. The liquid runs down this tube and evaporates as it flows up around zigzag on each side of the liner. That is what we refer to as the secondary refrigerating system that cools the main food space. [1329]

Mr. Ramsey: I wonder whether the jury could be shown Defendants' Exhibit 14-N. It is a photograph.

Q. Now, does that portray the secondary liner on the right-hand side of that as you have been explaining it—in the middle, rather?

A. Yes. This black part. You can see the lighter colored tubes zigzag back and forth just as they do on this Exhibit 117. At the right of that is the primary system; that is the main refrigerating system of the Admiral.

Q. Now, the colors which you were talking about are on a little colored card in the lower left-hand corner?

A. In the lower left-hand corner we have green, which is the primary evaporator; then red, which is the liquefying unit of the primary; that is the part in the base and in the very top is the primary; in between we have the secondary which is blue,



(Testimony of Glenn Muffly.)

the expander or evaporator; and the yellow on there for the liquefying unit or condenser, this rectangle (indicating).

Q. Does the portrayal of the refrigerator and, particularly, the schematic view of the system correctly reflect that that is in the accused structure manufactured by Admiral?

A. Yes. That is the correct showing of the system.

One difference is that these two plates have been separated so you can see them both. They really are clamped together. [1330]

Q. Now, considering the elements of Claim 2, I notice that you have on Elements 1, 2, 3, and 4 pointed to the corresponding portions in the accused structure. The cabinet is just the exterior of the refrigerator?

Mr. Cuningham: If your Honor please, I object. I think the witness ought to testify.

The Court: Yes. But that is a preliminary thing. Go ahead and tell us 1, 2, 3, and 4, what they refer to in both boxes without any——

The Witness: Without any further questions?

The Court: That's right. Is that all right, Mr. Cuningham?

Mr. Cuningham: Well, sir, of course you realize this is a very vital point of the case, the issue of infringement, as I understand it.

The Court: Yes. But he only went to the question of a cabinet, Mr. Cuningham.



(Testimony of Glenn Muffly.)

Mr. Cuningham: It seems to me leading at this point or giving him his head is objectionable, but I bow to your Honor's ruling.

The Court: Well, I am agreeing with you, Mr. Cuningham.

Go ahead, Mr. Muffly, and tell us what these various items refer to.

Q. (By Mr. Ramsey): Might we first break that down into the two, the cooling compartment—what is the cooling compartment?

A. The cooling compartment in the Admiral refrigerator is [1331] the compartment enclosed by/within the liner, the place where you put food, the main section of the refrigerator.

Q. Will you now point to it on the physical exhibit? What is the cooling compartment?

A. This space within. (Indicating.) This is the compartment enclosed by the door and its limits are the walls and the lining of the doors.

Q. Now, what is the freezing compartment Element 3?

A. The freezing compartment is the same portion of the upper in the top of the cabinet and we see that Exhibit No. 117-A. You can see it across the room.

Q. Would you mind going over there and pointing to it so there will be no difficulty?

A. I have—oh, they can't see it. I have placed my hand within the freezing compartment, and that is surrounded by this liner which in turn is sur-

(Testimony of Glenn Muffly.)

rounded by the primary evaporator, and this is closed, of course, by its own door.

Q. Fine. Thank you. Now, taking up Element 5 of Claim 2, what is the cooling refrigerant expander?

A. In the Admiral the cooling refrigerant expander is pointed to by the line that leads to Figure 5, and is that coil we have been talking about that is attached to the outside of the main food compartment liner. Did I understand I was to go right ahead?

Q. What was that? [1332]

The Court: Yes, that's what you were supposed to do and you missed No. 4.

The Witness: I repeat, then: We had the cabinet, I mentioned that. The cooling compartment is the interior of the main food space in both. It's 14 in the Potter and no numeral, but it's out in this space in the Admiral. No. 3, the freezing compartment. No. 4, thermal insulation points to the wall. That is cross-hatched to indicate insulated wall. And then the same way over here as a cross-hatched section that indicates insulation, and that does go around both compartments as the claim calls for.

Then we come to 5, "Cooling refrigerant expander," and that points to the coil around the liner on the Admiral. And at the right of it points to the coil within the compartment 14 in the patent in suit.

Q. (By Mr. Ramsey): Would you state the number of the cooling coil in the patent in suit?

(Testimony of Glenn Muffly.)

A. 25 is the reference character pointing to the coil.

Q. Now, there is a legend following the first indentation under the No. 5, "Heat conducting surfaces within said cooling compartment." I note the legend "No." Would you explain them, please?

A. At the left I have placed "No," indicating that the heat-conducting surfaces of this expander are not within; they are outside of the cooling compartment, whereas at the right [1333] it says "Yes," indicating that the coil 25 is actually within the compartment 14 in the Potter patent.

Q. Would you mind pointing to those parts again on the physical exhibit?

Mr. Byron: 117.

The Witness: On 117 this compartment (indicating) and on the——

Q. (By Mr. Ramsey): Never mind, just the compartment and what you call the cooling refrigerant expander.

A. The expander tube on the outside of it (indicating).

Q. Moving to the next bracket sub-indented portion, will you discuss that?

A. That section reads: "Constructed and arranged to maintain heat conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment." And at the left it says "No. Is a function of thermostat." And there is a pointer that leads to a thermostat and at the right likewise it says—there is a note—my note

(Testimony of Glenn Muffly.)

added—"No. Is a function of thermostat." And a lead line goes to the upper left-hand corner of the compartment 14 in the Potter refrigerator, where we see a device No. 31, which is the thermostat, stops and starts the motor.

Mr. Cuninghame: Upper right-hand, is it not?

The Witness: Upper right.

Mr. Cuninghame: I think you said "left." [1334]

The Witness: That's upper right. 31.

Q. (By Mr. Ramsey): Move to Element 6, "A freezing"——

The Court: I don't understand. Is your contention that the claim in the Potter is not accurate and that it doesn't do that which it proposes to do?

The Witness: The point is that the cooling refrigerant expander is not the device that controls the temperature or its own temperature. Its temperature is controlled by the controls, not by itself. It isn't a function of the expander itself to control its own temperature.

The Court: Well, what about the answer to my question, then? Is it Yes or No?

The Witness: I am afraid I didn't—can you tell me that question?

The Court: Well, I was just asking you whether it is your contention that the claims from which you just read, "Constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment," is to be found in the Potter



(Testimony of Glenn Muffly.)

box, or is it the function of the thermostat and, if so, is that an error in the claim?

The Witness: I would say it's an error in the claim, and I have said "No" to both, meaning it does not read on the Admiral and it's also an error to state it that way in the Potter. [1335]

The Court: It doesn't read on the drawing of Bronaugh and Potter?

The Witness: That's right.

The Court: Go ahead.

The Witness: In both refrigerators it is the thermostat that controls that temperature.

Q. (By Mr. Ramsey): Next considering Element 6, and I note a "No" on one side and a "Yes" on the other. Would you explain that quite briefly?

A. "A freezing refrigerant expander having heat conducting surfaces within said freezing compartment." Well, obviously on the left I say "No" because the expander is not within the freezing compartment but outside of it.

Mr. Byron: Will you please say "Admiral" and "the patent in suit" so we will all know?

The Witness: In the Admiral it obviously is not within the freezer but wrapped around the outside of it. On the right-hand side I say "Yes," with reference to the Potter refrigerator, the patent in suit, because it is within this large compartment 13, the expander.

Q. (By Mr. Ramsey): If I were to ask you to explain your legend "No" to the function of the thermostat with regard to the bracketed portion un-



(Testimony of Glenn Muffly.)

der Element 6 on both ends of it, would your answer be the same—would it not be the same as similar legends under Element 5? [1336]

A. Yes, it would be the same.

Q. Now, "Volatile refrigerant in said expanders" which is Element 7 and the bracketed portion thereunder. A. Yes.

Q. "A single liquefying unit associated with said expander and constructed and arranged to condense refrigerant expanded by heat extracted from both said compartments." Will you explain your legend and your interpretation of those to the jury?

A. The Item 7, "Volatile refrigerant in said expanders," at the left it says "Yes" with reference to Admiral because there is volatile refrigerant in all of the two systems of the Admiral.

On the right it says "Yes" because there is volatile refrigerant in the one system of the Potter refrigerator. And 7 and 9 are related because 9 says "Volatile refrigerant circulating through said expander being the sole heat extracting medium." There there is a difference. At the left there is a "No" because there are two volatile refrigerants.

Mr. Byron: Is that Admiral?

The Witness: That's Admiral. And at the right it is "Yes" because there is only one in the Potter. Then the 8 in between it refers to the handling of the refrigerant—refrigerant or refrigerants. It calls for a "Single liquefying [1337] unit associated with said expanders constructed and arranged to condense refrigerant expanded by heat extracted from

(Testimony of Glenn Muffly.)

both said compartments." In that case there is a "Yes" at the right for the Potter because there is only one condensing unit. And at the left there it says "No," there are two because there are two liquefying units instead of one. The first liquefying unit we see in the base consisting of the lead condenser and that is the one for the primary. The second condenser we see in the rectangle having the yellow lines on it in the Admiral, that is the condenser of the secondary circuit.

Q. (By Mr. Ramsey): Will you point to physical Exhibit 117 to the condenser?

The Witness: The condenser is this plate (indicating) or properly the tubes that are attached to this plate, and they go—loop back and forth and then lead to this (indicating) as you see in the drawing, this tube here between the plates and the liner.

Q. Why do they call that a condenser?

A. Because its function is to condense the volatile refrigerant which evaporates in the secondary evaporator.

Q. It might be helpful if you would explain briefly the manner in which it evaporates in connection with that secondary circuit.

A. The refrigerant is sealed within this system of tubing [1338] which includes the evaporator around the liner and the condenser on this secondary plate. The refrigerant having been condensed flows through the center where there is a C leading in this vertical tube, goes down to the bottom and

(Testimony of Glenn Muffly.)

that is a path for liquid to flow from the condenser down from that out into these tubes, and as it evaporates it becomes lighter, the bubbles help it to rise, so it flows up again, and that vapor or mixed vapor and liquid passes into the condenser at the top and by gravity flows down here as it condenses. That is cooled by contact with this primary plate, which is way down below, zero, being just as cold as the evaporator that cools the freezer.

Q. Does the refrigerant ever leave that secondary circuit?

A. No. That refrigerant is sealed within this system of tubing and remains there for the life of the refrigerator.

Q. Will you next consider Element 9?

The Court: Before you do it, I was wondering: Opposite Element No. 5 you say "No. Is a function of thermostat." Opposite Element No. 6 with reference to the Potter and Bronaugh you say "No. Is a function of expansion valve." Is a expansion valve and a thermostat the same thing?

A. No; they are two separate things. In the Potter patent it is maintained at the—freezing compartment temperature is regulated by the expansion valve and the cooling compartment temperature is regulated by the thermostat 31. And in that [1339] Mr. Potter is more or less correct.

The explanation of why, he says that the expansion valve determines the pressure at which refrigerant evaporates in his freezer evaporator and, of course, having a pressure at, say, five pounds—that's

(Testimony of Glenn Muffly.)

some 8 below zero—that determines that any refrigerant which evaporates in that coil evaporates at 8 degrees below zero.

So he is correct in saying that that expansion valve setting determines the temperature at which the refrigerant evaporates in the coil. He is not quite correct in saying it determines the temperature of the compartment adjacent because that would depend upon what they put in it in heat.

Now, after this is cooled and the refrigerant flows into that upper compartment, the evaporator 25, ultimately that would also come down to 8 degrees below zero and he has no control on that itself, but he does have a thermostat near it, and that stops the system before you freeze the materials in the upper compartment. [1340]

Q. Considering element 9 of the claim on 114-A, would you read it?

A. I will read it to you. Item 9 refers to volatile refrigerant circulating through said expanders being the sole heat-extracting medium.

Now, on the right-hand side I have said “Yes” because there was only one refrigerant in the Potter refrigerator, and it is the sole heat-extracting medium. At the left I have marked it “No” because there are two refrigerants in two separate systems in the Admiral refrigerator.

The Court: When you refer to the left you refer to Admiral, and when you refer to the right you refer to Potter; is that not right?



(Testimony of Glenn Muffly.)

The Witness: Yes. I sometimes forget to mention the names.

The Court: The record will so show.

The Witness: Yes.

Mr. Ramsey: I wonder if we can refer—did you finish your answer, sir?      A. Regarding No. 9?

Q. Yes.      A. Yes.

Q. I wonder if we can refer to 114-B.

The Court: Have these been admitted?

Mr. Ramsey: They have all been admitted. First off, [1341] would you please say under whose directions these several Exhibits 114-A to 114-L were prepared?

A. They were all prepared under my direct supervision. I made the original sketches and checked the work of the draftsmen, and I added these notes at the right and the left to indentify and the lead lines that point to the various parts of the Admiral at the left and Potter at the right.

Q. This one refers to Claim 4 of the patent in suit?      A. Yes.

Q. Without repeating yourself too much and commenting only on the points of difference between Claim 4 and Claim 2, would you explain your legends and your interpretation of Claim 4?

A. Yes, the first items are identical, and the difference between these two claims is mainly down here in Item 10 which we touched on only as a thermostat on the first chart. This has under the Item 10 thermostat, and at the left we first say "Yes" for the Admiral and "Yes" for the Potter



(Testimony of Glenn Muffly.)

because there are thermostats. There is a thermostat in each, but the next section of that reads, "Responsive to the temperature of said cooling compartment and controlling the on-off cycles of said liquefying unit in response to said temperature." I have marked it "Yes" at the right for Potter. I have marked it "No" at the left for Admiral.

The reason is that this thermostat that is [1342] not within the cooling compartment but back of it responds to the liner temperature. That would be the nearest equivalent of thermostat 31 of Potter. That is the thermostat which controls temperature of the main compartment, but that thermostat does not control the system in the base, the stopping and starting.

In Potter the thermostat is a switch that stops and starts the motor. In the Admiral this thermostat is effective in opening and closing a valve which determines whether or not the secondary is cooled.

Q. I wonder if we might have physical Exhibit 117-A brought over so that the jury can see it and you can point out the physical parts.

(Physical exhibit referred to produced before the jury.)

Q. Can you point out on that physical exhibit physically where is that thermostat you are talking about?

A. This valve which does the controlling of the secondary system is in the tubing, and we see it

(Testimony of Glenn Muffly.)

here (indicating). Now, the location in the drawing in the Admiral refrigerator in the middle just above the green coil of the primary plate you see this device here. It is an electrically operated valve. That electrically operated valve is here on the tubing at the back adjacent to the primary plate of the Admiral assembly which goes with the primary system 117-A [1343] exhibit. Does that answer the question?

Q. Yes. Would you comment and read, the first line says, "Responsive to the temperature in the cooling compartment." To what is that responsive in the accused device, Admiral?

A. In Admiral that is responsive to this thermostatic bulb that is located adjacent to the secondary coil that cools the main food compartment. It is located outside of the coil but against the wall of it.

Q. Which compartment are you pointing to?

A. I am pointing to the main food compartment in the Admiral refrigerator, and that bulb controls a thermostatic switch that in turn controls the valve. I think maybe you want me to speak of the other bulb on the freezer?

A. Yes, that is right.

Q. Now, the bulb in the drawing of the Admiral refrigerator, we see at the top a heavy black line that runs to the left back of the freezer liner, and that connects with a little box here that indicates a thermostatic control that opens and closes the electrical circuit that goes to the motor inside of

(Testimony of Glenn Muffly.)

this sealed unit. That is a motor compressor unit, so the temperature on the back of the liner of the freezer, in other words, this location here, on this controls that valve. The reason you do not see it here is that the electrical part is not mounted. There is an electrical coil surrounding this solenoid, this valve—it is called [1344] solenoid—that is connected with a switch that responds to the temperature of the bulb, responds to the freezer temperature.

Q. Now, the last element or the second in No. 10 you have a marking of "Vague." Would you explain that?

A. Yes. That refers to thermal insulation around said cooling compartment having less resistance to flow of the heat thereto from the outside atmosphere than does the thermal insulation of the freezing compartment. That is the first part of that block of "Vague." Now, that is vague for the reason that it does not specify whether they are talking about the total heat that flows in or the heat that flows through a given square foot of wall, and so we do not know. We do know from general proportions that more heat does flow in total amount of heat into the upper compartment than flows into the lower compartment.

In the Admiral it is likewise true, there is more heat flows into the cooling compartment than flows into the freezer for the reason it is so much larger, so much more wall.

Now, the balance of that, reading this last part

(Testimony of Glenn Muffly.)

of Claim 4, the last phrase of it, "To insure starting of said liquefying unit by heat flowing into said cooling compartment during an off-cycle of said liquefying unit before the temperature in said freezing compartment approaches [1345] a non-freezing value."

I have marked that "Vague" because that infers, that wording infers that because this thermostat is in the cooling compartment you insure cooling of the freezer, and that is incorrect as I will explain.

Q. Give your explanation.

A. The vagueness merely prevents us from applying it to the Admiral, but we do know that the thermostat is not in the same place so that this cannot apply to the Admiral having no such thermostat in the food compartment.

Q. Does that complete your answer?

A. I might go ahead to say why.

The Court: Go ahead.

The Witness: This Potter refrigerator, as Mr. Potter discovered a little later, if you set it on a back porch, as many people did in the early days of electric refrigerators, and the weather goes down to about 50 degrees and you have this bottom full of frozen food, the frozen food will thaw out. Now, that is a mystery to many housewives and to the public as to why a refrigerator that makes ice rapidly on a hot day fails to make ice on a cool day. There is a natural reason. If this thermostat in the



(Testimony of Glenn Muffly.)

Potter refrigerator which controls that temperature to around 40 degrees is only operated every five or six hours or maybe skipping a whole 24 hours because the weather, the room— [1346] ambient atmosphere we call it—is just as cold as the inside, almost as cold as the inside of the refrigerator, so it don't have to start often enough to keep the frozen food frozen, and you have a condition of a failure to maintain frozen foods.

Later, after some experience in production, there was another thermostat put in Potter refrigerators. We do not see it here.

Mr. Cuningham: If your Honor please, I move to strike the word "later" from the answer. "Mr. Potter discovered it later," I don't know how he knows this, how he knows when Mr. Potter discovered it, how he knows Mr. Potter discovered it.

The Court: Do the two thermostats appear in the Bronaugh and Potter specifications or drawings?

The Witness: No, no.

Mr. Cuningham: Yes, your Honor.

Mr. Byron: Don't interrupt the witness.

Mr. Cuningham: I am sorry.

The Court: That is a question of fact. Go ahead.

Mr. Ramsey: May we refer now to 114-C and very shortly thereafter D.

(Exhibits referred to produced before the jury.)

Q. (By Mr. Ramsey): This exhibit reads,



(Testimony of Glenn Muffly.)

“Claim 2 does not [1347] read on Amana.” On the left is a picture marked “Amana.” On the right is the patent drawing of the patent in suit. Are you familiar with the Amana refrigerator?

A. Yes.

Q. The accused device?      A. Yes.

Q. Does that sketch pictured on the left-hand side correctly portray it?      A. It does.

Q. Does your analysis of Claim 2 of the patent in suit with regard to Amana correspond to your analysis of the Admiral?      A. It does.

Q. Do you have any further comment to make?

A. Amana and the Admiral are substantially the same so far as we are concerned with this.

Q. Will you next refer to 114-D? Are you familiar with 114-D?      A. Yes.

Q. It is marked, “Claim 4 does not read on Amana,” and shows the Amana structure and the Bronaugh. If I were to ask you the same questions with regard to 114-D as relating to Amana that I did with regard to the Admiral structure, would or would not your answers be the same?

A. My answers would be the same. [1348]

Q. Thank you. Let us proceed to 114-E. On this, on the left-hand side is the Anderson patent 1,439,051, and the other the Potter or patent in suit. Will you explain this quite briefly and describe the legends and the reasons for your conclusions?

A. Yes, that first No. 1 is obvious; both cabinets. No. 2, a cooling compartment, it points in the An-

(Testimony of Glenn Muffly.)

derson to the compartment 6. It points to the right to the compartment 14 of the Potter.

The next item, No. 3, a freezing compartment, the lead line pointing to Anderson's compartment 7 and the lead line pointing to the right to Bronaugh and Potter's compartment 13, which includes 12, 12 being within 13. The thermal insulation points to the left, an insulated wall of Anderson, and to the right to the insulated wall of Potter. It is around said compartments, and it insulates them apart.

Item 5, a cooling refrigerant expander having heat-conducting surfaces within said cooling compartment, and that points to the coil that is wrapped around the, back and forth, coil 40, which is on the rear wall, on the side walls and on the inside of the liner of the main food compartment 6, and at the right this cooling refrigerant expander is the coil 23 within Potter's compartment 14. Below that we have a phrase saying: [1349]

“Constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees F. and is maintained at a humidity whose relative value is at least 100 at 32 degrees F.”

This merely says at the left same as Potter, at the right same as Anderson. That means the effect is the same. They both have cold inside of the food

(Testimony of Glenn Muffly.)

compartment. They both operate at a frosting-defrosting type of cycle. They are both quite high in humidity, and, so far as this wording is concerned, they are the same.

Below that was 6, "a freezing refrigerant expander having heat-conducting surfaces within said freezing compartment," points to coil 22 at the right for Potter and to the left the coil 34 within the freezing compartment 7 of Anderson.

Below that, a single liquefying unit associated with said expanders and constructed and arranged to contain refrigerant expanded by heat extracted from both said compartments.

"Yes" on both sides because this cooling is continuous throughout the freezer cooling system, through the main food space cooling compartment and back of the compressor. [1350]

A. I pointed to Anderson, and I now point to Potter, and the same thing is true. The coil goes into a freezer coil after and expands in series to coil 23 within the main food compartment, the coil returning then to the compressor.

Next, Item 9, a volatile refrigerant circulating through said expander, being the sole heat-extracting medium.

I marked it "Yes" on both sides because it is one refrigerant circulating through both of these refrigerators.

And the last item, a thermostat responsive to a temperature in one of the compartments controlling the operation of the liquefying units. On the

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right we say "Yes" for Potter and point to the control 31 which is located in the warmer compartment 14. At the left we refer to page and line of the specification of Anderson which tells us that there is a thermostat mounted on a vertical member between the two doors within this warmer compartment, so Anderson put his thermostat in the same location that Potter had his thermostat, in the warmer compartment.

Q. I was referring to 114-F. The title of this exhibit is "Anderson in '18." It portrays all the Potter Claim 4, and this is a parsed form of Claim 4. You have previously described the functions between Claim 4 and Claim 2. With that in mind, will you describe this exhibit, please?

A. This substantially duplicates the other chart, the [1351] previous chart, but when we get down to the bottom where we had this additional wording and that refers to insulation relationship between the two compartments, it is marked "Vague" on both sides because the words themselves are vague, do not tell us exactly how that is done, but in either of these it is true that heat will leak into the warmer compartment faster than it leaks into the colder compartment. That is because there is so much more wall area, and it will leak into the warmer compartment than leak into the freezer, and in both cases they put the control in the warmer compartment. [1352]

Q. (By Mr. Ramsey): May we pass now to



(Testimony of Glenn Muffly.)

Defendants' Exhibit 114-G. This is "Gibson filed before B & P" is like Potter Claim 2.

The Court: Like Admiral.

Mr. Ramsey: Like Admiral. Pardon me. Claim 2 on the left is the Gibson patent Reissue 21,941; on the right Admiral. Would you please explain—do you know the operation of the refrigerator shown in the Gibson patent?      A. Yes.

The Court: Which one is it?

Mr. Ramsey: Will you please explain that to the jury?

Mr. Cuninghame: If your Honor please, may the record likewise show the subtitle and I quote, "Claim 2 Bronaugh-Potter Re. 23,058"?

Q. (By Mr. Ramsey): That's the patent in suit, is it not, Mr. Muffly?

A. That's Potter patent in suit 23,058. It identifies the wording that this is Claim 2 from the patent in suit.

The Court: I don't understand that.

The Witness: It refers to a small wording at the top that says, "Claim 2 Bronuagh and Potter Reissue 23,058." That is the wording of this claim and it's marked at the top—should be—on the chart. That's merely the identification it records.

Q. (By Mr. Ramsey): Similar to the title on all the exhibits?      A. They are marked. [1353]

The Court: All these legends and these statements were prepared by you?

A. That's right.

The Court: You merely took the patent and re-



(Testimony of Glenn Muffly.)

produced them on these various sheets except with Admiral and Amana, and you reproduced a copy of the box on the left-hand side of the sheet?

A. That's right.

The Court: All right.

The Witness: And added the notes of "Yes" and "No" and explanation. But the material in the center is word-for-word of the claims in suit. We used Claim 2 and Claim 4 as typical, thinking it would be unnecessary to do the same thing with 1 and 3.

The Court: And are you now comparing Bronaugh and Potter Claim 2 with Gibson and with Admiral?

A. Correct. I am using Claim 2 of Bronaugh and Potter patent to show how these—this claim would read on Admiral and to what extent and that it would also read on Gibson.

The Court: All right.

Mr. Byron: You mean to show how these claims will or will not read?

A. I said to what extent what portion of the claim would fit each. It does not read 100 per cent, but it does show the similarity of Gibson and Admiral. The Gibson patent [1354] and Admiral refrigerator are substantially identical in principle.

Q. (By Mr. Ramsey): Would you explain the operation of the Gibson patent? A. Gibson?

Q. How it operates?

A. Yes. The Gibson patent, Reissue 21,941, shown at the left of the chart has, commencing at the base

(Testimony of Glenn Muffly.)

with the condenser colored red, a tube leading up to the upper compartment where we see some green tubing. That is the evaporator within the freezing compartment which is the upper compartment of Gibson. This green portion constitutes the evaporator of the primary system and the suction tube leads—leads from it at 55—the tube is numbered 55 near the compressor at the base.

Compressor 60, that is a suction line completing the circuit—the primary circuit just as we trace the primary circuit in red and green on the Admiral.

Now, in addition to that there is an evaporator which surrounds the liner of the main food compartment 26 of Gibson and that coil is marked 27, and that coil is an evaporator of the secondary system and it does the work of cooling this liner which is known as the cold wall type of refrigerator.

The vapor from the evaporator goes up and down [1355] through this coiled tubing which is colored yellow, that constituting the condenser of the secondary system, and the liquid runs back down and again circulates around the liner to cool the main food compartment. That type of refrigerator is the Frigidaire cold wall. Mr. Gibson is with Frigidaire.

Q. Would it help you to refer to 114-N that you have previously used to illustrate your point?

A. Yes. This is another drawing from the Gibsont patent. The drawing we have here shows the refrigerator as a whole. This is another drawing

(Testimony of Glenn Muffly.)

from the same patent. It shows a liner and tubing surrounding the liner and leading up, and that corresponds to this exhibit, Admiral Exhibit 117.

The cold wall is a liner which is surrounded by this tubing 68 coming up through the tubes 83 and 78, which lead to and from this coil 80 which is cooled by the primary refrigerant in the freezer. Liquid runs down and around and evaporates and comes up condensed again. That is one of the very well known refrigerators.

Q. Now, following that explanation, Mr. Muffly, will you discuss this 114-G which is on the easel?

A. Yes. Taking this Gibson refrigerator at the left and the Admiral at the right, and comparing how this claim would read on them or failed to read on them, we have the cabinet, both sides, cooling compartment on both sides, freezing [1356] compartment on both sides, thermal insulation on both of them, a cooling refrigerant expander "Yes"—or there is an expander pointed to, but the next line saying "Surfaces within the cooling compartment," it is "No" on both sides because that coil is not in the cooling compartment in either the Gibson refrigerator or the Admiral refrigerator.

And Gibson is Mr. Gibson of Frigidaire, not the Gibson refrigerator. There is a make of refrigerator called Gibson. This item continues "wherein constructed and arranged to maintain heat conducting surfaces above 32," of Drawing 8, "whereby the cooling compartment is cooled thereby" and they have a humidity value.

(Testimony of Glenn Muffly.)

Now, that again is over here in the right, and it says "No. It's a function of the thermostat." Now, we have covered that before in connection with Admiral, that this temperature—and what the evaporator does is a function of the thermostat rather than of the way you make the vapor itself. Having an evaporator you can run it either warm or cold.

At the left is a little different because Mr. Gibson provided a different means for controlling his temperature and he had it explained in his patent specification, the reference being to page 2, Column 1, Line 58-62. There is air injected into the system which gives him a limiting factor of control. [1357]

Q. You might explain a little more the air injected in what manner?

A. The chart of the secondary system consists of a refrigerant such as F-12 with some air or noncondensable gas added to it. That is done sometimes to change the characteristics of a refrigerant and mix something with it.

Q. It is your contention, I gather, that that mixture is the thing that produces the effect of the maintenance of temperature in Gibson?

A. Yes. That is as explained in the Gibson patent.

The Court: Gibson patent is described on the left-hand side of the sheet and Admiral on the right-hand side? A. Yes, Yes, right.

Now, there is a difference at the next step: "A freezing refrigerant expander having heat conduct-



(Testimony of Glenn Muffly.)

ing surfaces within said freezing compartment." At the left it says "Yes" for Gibson because obviously this freezing refrigerant expander is within the freezing compartment, whereas at the right I have said "No" because the Admiral freezing refrigerant expander is outside of the freezer—the freezing compartment.

Then the one about "constructed and arranged to maintain heat conducting surfaces at certain temperatures" and on both sides I have said "No. It is a function of"—at the right for Admiral "a function of the thermostat." [1358] And that is the thermostat that controls the freezer temperature by stopping and starting the motor compressor.

Now, at the left "No. Is a function of low pressure switch." Now, it happened that Mr. Gibson showed a different type of thermostat and it's known as a low pressure switch. It does the same thing but it does it without having any bulb above here in the freezer. The principle is an old one. It's done by the pressure of the suction vapor as it comes back to the compressor, and that reflects directly the temperature of the refrigerant in the freezing evaporator.

Item 7 "Volatile refrigerant in said expanders," yes, there is volatile refrigerant in both expanders. But when it comes to a single liquefying unit associated with said expanders, we have—I marked it "No." There are two both at right and left because both in Gibson and in Admiral there are two con-



(Testimony of Glenn Muffly.)

densers, one in the base of the cabinet and in one that is cooled by the primary evaporator—that is, in the secondary system that cools the main food compartment.

Q. Do you have any reference characters for that?

A. The secondary condenser of Gibson is 80. The secondary condenser of the Admiral is the portion with the yellow color on the the rectangular plate we have been referring to before.

The Court: I think we have been going now for an hour [1359] and 20 minutes, and this is a good time to take a short break. Take a recess for about 10 minutes.

(Whereupon the jury was excused for a recess.)

(The following proceedings were held out of the presence of the jury:)

The Court: In this legend that you have here, “Gibson filed before B & P” is like Admiral. I was just going to ask you a question. If Admiral follows Gibson but Gibson and Potter anticipate each other, can Admiral be exonerated by reason thereof if Potter proves the date of his invention was prior to the filing date of the Gibson?

Mr. Byron: Well, there are two entirely different types. First may I explain—two entirely different types of refrigerator. The Admiral and the Gibson are cold wall type of refrigerators, whereas

(Testimony of Glenn Muffly.)

Bronaugh and Potter patent are the finned coil type. Now, then, if the claims in the Potter patent were broad enough to cover Admiral they would likewise cover Gibson—that's an answer to your question—assuming that Bronaugh and Potter patent is earlier in conception reduction to practice to Gibson. But we are citing, comparing these two because they are two entirely different types and recognized as different types, and our position is that the claims of the patent in suit do not read on Gibson and they do not read upon Admiral for the same reason. [1360]

The Court: Yes. But then you don't cite Gibson as anticipating——

Mr. Byron: That's right; we do not.

The Court: ——Bronaugh and Potter. That's what I wanted to know.

Mr. Byron: Yes.

The Court: Now, I would like to find out something else. Mr. Muffly says that Item No. 5 in Claim 2, for example, doesn't read on Potter. I mean, it's a misdescription. What does that mean? What does it mean when it's surplusage or it's incorrect? Does that invalidate the patent?

The Witness: Well, I am not qualified——

The Court: I am not talking to you. I am talking to Mr. Byron.

Mr. Byron: Well, I was thinking that the witness was going to answer, and I wasn't paying too much attention, your Honor, or I want to make sure that I do have the question.

(Testimony of Glenn Muffly.)

The Court: The question is, Mr. Muffly testified that Item No. 5 in these exhibits—earlier exhibits, which is a portion of the claim of Potter——

Mr. Byron: That's right.

The Court: ——is incorrect and when applied to the structure of the Bronaugh doesn't mean anything.

Mr. Byron: That's right.

The Court: All right. Now, the question I am asking, [1361] assuming that to be true, does that invalidate the Bronaugh-Potter patent?

Mr. Byron: Yes, it does, because it's a functional statement and it's an incorrect statement, and invalidates that claim.

The Court: Leave out the functionality of it.

Mr. Byron: That claim is indefinite and non-descriptive and therefore invalid.

This is Title 35, Section 112 of the statute.

The Court: I know the statute requires it to be set out definitely and with precision and all that, but suppose they describe a function or a purpose that is immaterial actually because Mr. Muffly has already testified that he could construct a box from the description and the drawings of the Potter. He said he could make a box.

Mr. Byron: Yes. But it wouldn't be the box as interpreted by Potter and as claimed by Potter, and it wouldn't be—for example, if Mr. Muffly were going to construct a box based upon the drawing of the patent in suit, he wouldn't have any finned coils in there. As he has said, he would have something

(Testimony of Glenn Muffly.)

else, a brine tank, because he doesn't know what those—that rectangle is sticking up there means and nobody else would know, according to Mr. Muffly.

Therefore he could construct something but it might be incorrect on his interpretation. [1362]

The Court: And is it your point that if Mr. Muffly would construct according to the specifications and the drawings it wouldn't be the box described in the claims?

Mr. Byron: That's right; it would not be.

The Court: But, Mr. Cuninghame has said that, of course, they didn't describe finned coils because they didn't even claim it and their claim is broader by reason of the fact that they didn't claim finned coils.

Mr. Byron: But they do not claim any structure which will do that. That's the point.

The Court: They don't claim where, in the claims or in the——

Mr. Byron: In the specifications they do not and in the drawings they do not. They do not describe any coil constructed or arranged in any manner to produce those results. That's the point.

The Court: Now, that comes to my next point: What is the correlation between the drawings, the descriptions, and the claims? Now, Mr. Cuninghame has submitted a form of instruction which says that the patent is made up of these three items. It's been approved by Mr. Kolisch and Mr. Lucas, they both approved that instruction. Now, Mr. Parker said,



(Testimony of Glenn Muffly.)

when he looked at that drawing, he could see that it is a finned coil or such. Now, is a finned coil necessary, or some similar structure necessary in order to maintain the [1363] validity of the patent in suit?

Mr. Byron: It is, yes, sir.

The Court: Why?

Mr. Byron: Because otherwise there is not the proper disclosure of it. Now, just let me read this one section again. This is Section 112.

“The specification shall contain”—and this is mandatory——

“The specification shall contain a written description of the invention and of the manner and process of making and using it in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains or with which it is most nearly connected to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.”

Now, this section is related directly and to nothing else but the specification, the description in the patent.

The Court: Will the Potter box do what Potter said it will do in his claims without the finned coil?

Mr. Byron: No, it will not, just like Anderson. But I might go on to say about Anderson, by virtue of his larger coils and more expansive coils, longer,



(Testimony of Glenn Muffy.)

he will accomplish the same results as though he did have finned coils. [1364]

The Court: Well, what about that? Does that make Anderson anticipate because he arrives at the same result in a different manner?

Mr. Byron: Yes. Exactly the same manner.

The Court: I thought you just told me it's a larger box.

Mr. Byron: Oh, no. I said the coils are larger.

The Court: Larger area allows more heat inflow in a freezer in warmer room temperatures?

Mr. Byron: See, these coils, your Honor, are much larger in the Anderson box, Defendants' Exhibit 115, than the coils which you cannot see in the Potter box.

The Court: What about that? How about that identity rule for infringement?

Mr. Byron: Yes. The identity are these: There must be identity of structure, identity in functioning, and identity in result.

The Court: Does that apply—that doesn't apply?

Mr. Byron: That applies only to infringement.

The Court: Well, how about the validity and anticipation?

Mr. Byron: I mean, to find infringement you have got to find identity in structure—that is, substantial identity in structure, substantial identity in functioning, and substantial identity in result.

The Court: And are you of the opinion that I should [1365] instruct the jury that if from an ex-

(Testimony of Glenn Muffly.)

amination of the description and the drawings a person skilled in the arts in 1929 or '31 would not have known that Potter had in mind a finned coil, then they must find the patent invalid?

Mr. Byron: That's right.

The Court: Is that correct, Mr. Cuninghame?

Mr. Cuninghame: Your Honor, I am not trying to evade, but I would like to have the question read. I'm sorry.

The Court: Will you read that question to Mr. Cuninghame?

(The Court's question propounded to Mr. Byron above was read.)

Mr. Cuninghame: Your Honor, a finned coil or its equivalent, because it's not limited to a finned coil. I would agree with that. The testimony is——

The Court: A finned coil or similar device?

Mr. Cuninghame: Yes. Brine tank or cold surface; extended surface is the best term I can now think of.

Mr. Byron: It's not in the claim.

Mr. Cuninghame: I think it is.

The Court: Assume something is disclosed in the drawing which is not disclosed in the description, what about that?

Mr. Byron: Then it's void, absolutely. The statute is mandatory on written description in the specifications.

The Court: Well, what about this question of comparative insulation which was put into the speci-

(Testimony of Glenn Muffly.)

fication some two or [1366] three years later? I understand from Mr. Muffly that the original drawing showed it and he could have constructed as follows—constructed a box with this differential insulation, but it's not shown in the description. Am I correct in that?

Mr. Byron: That's right.

The Court: All right. Now, what does that mean?

Mr. Byron: And it wasn't claimed either. It means that there is late claim. They claimed here more than two years after a device with this differential insulation was made and sold and thereafter by virtue of this late claiming those claims are invalid on the differential insulation.

The Court: And does that make the patent void?

Mr. Byron: Yes, it does, as to those particular claims calling for the differential insulation, Claims 3 and 4. [1367]

The Court: What should I submit to the jury?

Mr. Byron: Well, if they find that this Potter display embodying the differential insulation was sold more than two years, made and sold more than two years prior to the time of that amendment—

The Court: Wait a minute. The record shows that it was inserted more than two years after the first filing.

Mr. Byron: Then that is sufficient to invalidate—

The Court: You claim that you are entitled to that as a matter of law?

Mr. Byron: That is right.

(Testimony of Glenn Muffly.)

The Court: What about that, Mr. Cuninghame?

Mr. Cuninghame: I feel, your Honor, I think that is 150 per cent wrong.

The Court: It just has to be 100 per cent wrong.

Mr. Cuninghame: The reason I say 150 is because I think it is clearly wrong on the law. The Muncie Gear case—and I hope to have a memorandum and a very brief one on it—is the chief one that is relied upon by Mr. Byron. It boils down to this, your Honor, that it is a matter simply of the disclosure, original disclosure, and, of course, and everybody knows this, you can change a claim as you come within that. The Muncie Gear case, in that case they added a lot of new matter, and that is not true in this case.

The Court: Do you have any authority to indicate that [1368] you can at a later time after the expiration of two years include in the description matters which were shown in the drawings but which were not set forth in the description?

Mr. Cuninghame: Oh, yes, your Honor; and, furthermore, it is not only the specification and the drawings, but it is the original claim that are a part of the specification, and there is another angle——

The Court: Well, as I understand it, they did not claim differential insulation in the earlier claims.

Mr. Byron: That is correct.

Mr. Cuninghame: It is not a matter of claiming, your Honor. I did not mean to make a confusing statement. I say that a claim which is supported

(Testimony of Glenn Muffly.)

by the drawing, the specification, or by the original claims.

The Court: Do you use the word "or"? Did you say "or"?

Mr. Cuningham: I did, sir.

The Court: Very well.

Mr. Cuningham: Well, I think the word "or" is right and also if it shows that you are claiming it—that is perhaps not too clear——

The Court: Will you give me a case some time today, any time today, but just give me a case to support you? Perhaps Mr. Cheatham can find a case.

Mr. Cheatham: We have thought about it. We have been so busy. It is a question of [1369] getting——

The Court: Give a citation. All I need is a citation.

(Discussion off the record.)

Mr. Cuningham: We will, sir.

The Court: We will take about a five-minute recess.

(Short recess.)

(Thereupon, the jury returned from recess and the following proceedings were had in its presence.)



## GLENN MUFFLY

a witness in behalf of Defendants, thereupon resumed the stand and was examined and testified further as follows:

## Direct Examination

(Continued)

By Mr. Ramsey:

The Court: I discussed with counsel the question that was propounded by one of the jurors, I think Mr. Duyck, as to whether the members of the jury had the privilege of asking a witness a question. Now, ordinarily, we try to discourage this sort of thing because usually the lawyers bring out everything that should be brought out, but sometimes they make mistakes, and, as you have noticed, I have asked questions from time to time because I was not clear on some of the things that the witness was testifying to, and it was for that reason I discussed this with counsel for both [1370] plaintiff and defendants, and they said it is perfectly all right if someone has a question that they would like to ask a witness, that they may do so. Just state to me the question that you want to ask, and I will listen to the question, and then I will determine whether it is proper, a proper question, or not.

Juror Duyck: My question, your Honor, was academic rather than something I had in mind.

The Court: If Mr. Muffly is here after you decide the case, then you can talk to him, but do not talk to him before the case is over. Go ahead, Mr. Muffly. You were discussing, I believe, Gibson.

(Testimony of Glenn Muffly.)

The Witness: Yes, right.

Mr. Ramsey: 114-J.

The Witness: And I was pretty well along with the comparison. I had, was just on explanation of the, I think that this control of the Gibson refrigerator was different but accomplished the same thing that we had in the Admiral by having a bulb up here responsive to the temperature of the freezer and that control is the control that starts and stops the motor.

Now, Gibson has a control that starts and stops the motor, but it has no bulb up here in the freezer, but it is just as good as having a bulb because it is connected to the freezer line that is part of the suction that goes [1371] back up there so it reflects the temperature of the refrigerant that is inside of the primary evaporator itself, so it is just as if the whole primary evaporator were made into the bulb of this control down here, so in both cases the sensing of the temperature of the freezer is the thing that controls the starting and stopping of the motor.

Now, they both have control but a different type of control of controlling the secondary. In the Admiral there is a sensing device that is on the outside of the liner of the main food space that reflects temperature of the main food space, and that operates a switch, and the switch in turn operates a valve that starts and stops the cooling of the secondary system that surrounds the liner of the main food compartment.

Q. Referring to 117, Exhibit 117?

(Testimony of Glenn Muffly.)

A. Referring to Exhibit 117, yes, where we see those coils. Now, this—we have gotten down here to the point that on this side is a function of the low-pressure control here with the thermostat, and then we come to a volatile refrigerant in the expander. I have said “Yes” both sides because there is volatile refrigerant, but at the next point, a single liquefying unit, the answer is “No” to Gibson and “No” to Admiral because each has two liquefying units, the primary system liquefying unit in the base, the secondary liquefying unit is the yellow coil of the Gibson within that tank. The coil [1372] is marked 80, and in Admiral we have this yellow coil on the plate of the secondary condenser.

Now, the next item, No. 9, which says “No” for both Gibson and Admiral because one volatile refrigerant circulates through said expanders, circulating through said expanders, is not the sole heat-extracting medium. There are two volatile refrigerants, both heating and extracting mediums, so in that respect Gibson and Admiral are alike.

The thermostat responsive to the temperature in one of said compartments, this claim does not specify which of the compartments controls the liquefying unit. Well, now, in both Gibson and Admiral there is a thermostat that starts and stops the motor that drive the primary compressor so the answer is “Yes” for both.

Q. Have you completed your explanation of that to the jury?      A. Yes.

(Testimony of Glenn Muffly.)

Q. I wonder if we might have Exhibit 114-H?  
(Exhibit referred to produced.)

Q. This covers Claims 4 and refers to the Gibson-Admiral drawings as part of Claim 2 in suit. Will you treat that the same as you did the others without repeating the parts that are common in Claims 2 and 4?

A. Claim 4 reads on Gibson and Admiral alike until we get down here to the thermostat, and it says, "Responsive to the temperature in said cooling compartment." [1373]

Now, the answer is "No." I have marked it "No" on both sides because neither Gibson nor Admiral has a thermostat responsive to the temperature of the cooling compartment to control the on-off cycles of said liquefying unit, being the primary liquefying unit.

In both Gibson and Admiral that control of the liquefying unit is in response to the temperature of the primary or freezer.

Then a continuation of that goes into the thermal insulation, around the cooling compartments, and so forth, and that is marked "Vague" on both sides. It don't make no sense to me, but whatever it does say, it applies to Gibson just the same as it applies to Admiral, to the same extent.

Q. Have you completed?                      A. Yes.

Q. Do you remember the exhibits that you prepared and identified, that were identified and introduced as 114-I and 114-J, comparing Gibson to

(Testimony of Glenn Muffly.)

the Claims 2 and 4 of Bronaugh and Potter and Amana?      A. Yes.

Q. Could you say whether your answers are the same with regard to Amana as you have answered with regard to Admiral?

A. That would be the same.

Q. We will skip that explanation. May we have 114-K? [1374]

The Court: 114-K?

Mr. Ramsey: Yes, 114-K.

(Exhibit referred to produced.)

Mr. Ramsey: And might we have the Larkin Patent, Exhibit 106?

The Witness: I have a copy of it.

(Discussion off the record.)

Mr. Ramsey: This is a comparison drawing of Anderson, 1,439,051; Larkin, 1,776,235, and the patent in suit, 23058. Would you first explain the Larkin patent to the jury?

A. The Larkin patent has several drawings, one of them being of a long showcase with cooling elements in each end, and on this chart, 114-K, we have just one figure, Figure 3, showing one of those cooling elements, and the Larkin patent has to do with the cooling element. This is in Figure 1. It merely shows that kind of a refrigerator, that cooling element, that kind of a refrigerator that that cooling element might be put in.



(Testimony of Glenn Muffly.)

Q. Does he refer in the specification to household refrigerators?

A. Yes, he says, "This invention relates to refrigeration in general and particularly to cooling units adapted for use in display case refrigerators, refrigerator cars, storage rooms, household refrigerators, etc."

Q. Where are you reading? [1375]

A. I am reading from Page 1, Lines 4 to 8, inclusive.

Q. Would you continue your explanation of the Larkin patent?

A. Larkin was in the business of producing this finned coil, and he says in his patent, explaining the virtues of his finned coil, reading from Line 33, Page 1:

"\* \* \* meats lose a great deal of weight by dehydration due to exposure to below-freezing temperature"——

And again at the bottom of that column he mentions "dehydration of the meats," and in the middle of the second column of that patent he refers to "aluminum heat-absorbing plates," or fins that are attached to the coil, and this patent goes on to explain the virtues of having this type of coil with a lot of surface, and in the middle of the chart there is a quotation that reads on Page 2, Line 113, over to Page 3, Line 15, and he reads:

"With the present type of coil properly arranged in the casing, a temperature of 36 degrees F. can be maintained in the casing without frosting the

(Testimony of Glenn Muffly.)

plates at all"—the casing being the refrigerator—"consequently without freezing or dehydrating any of the contents of the casing whatever. The very large surface area and rapid heat absorption of the [1376] aluminum plates all lead to a rapid temperature drop when the unit is in operation. Since this temperature drop is less than two degrees, it follows that each refrigerating cycle of operation must be of very short duration, and, consequently, must greatly reduce the amount of power required to maintain it in operation.

"Whatever little moisture may be picked up from the air in the casing is deposited on the plates; and, because of the large surface area of these plates, must, when condensed, be spread on such plates in a very thin film, which is constantly being removed by the circulating air and returned to the air and meats from which it was taken.

"Where below-freezing temperature must be maintained on the plates, as in prior coolers, it is obvious that any moisture taken from the meats must be condensed and frozen on the plates and cannot be removed therefrom by the circulating air. In this case the meats not only lose weight which must be recovered"—

The Court: "'\* \* \* cannot be recovered'"—"In this case the meats not only lose weight which cannot be recovered." Didn't you say "which must be recovered"? [1377]

The Witness: "'\* \* \* which cannot be recov-

(Testimony of Glenn Muffly.)

ered"—right—"but also deteriorate greatly in quality."

That is referring to what other people did before.

The last paragraph:

"This maintenance of humidity is only one of the most important results flowing from the use of cooling coils designed as disclosed herein."

Mr. Byron: "As disclosed herein."

The Witness: Yes, "as disclosed herein."

Q. (By Mr. Ramsey): Now, referring back to Exhibit 101, which is the file wrapper of the patent which appears in the reissue patents there, was this Larkin patent cited by the Examiner?

A. Yes.

Q. Are you sure about that?

A. No. Wait a minute, the Larkin patent, no.

Q. Do you want to look at the history?

A. I know it was not. I misspoke.

Q. Would you continue?

A. The Larkin, as I mentioned, didn't come from that source.

Q. Have you completed your explanation of the Larkin patent, or are there some other parts that you think the jury should know?

A. There is a pertinent point of the specification of the [1378] Larkin patent.

Q. Not too long?

A. Well, this is short. I am reading from Page 5, Line 87, and starting with Line 93:

"A temperature of 36 degrees F. and be main-

(Testimony of Glenn Muffly.)

tained at the center of the casing by maintaining a temperature of 34 degrees F. on the fins of the cooling units. Since this is above-freezing point, this temperature of 36 degrees can be maintained without frosting the fins."

That is an explanation of the fact that Larkin uses this extended surface to maintain high humidity, no frosting.

Q. Does that complete your explanation of Larkin?      A. Yes.

Q. Going back to the final part of 101 again, which is U. S. Patent 2,056,165, I will read it to you. It may recall it to your mind. This appears on Page 88 of the file wrapper and was at the conclusion of the application and the claims submitted at that point. I am now reading:

"We now come to the final group of patents, namely, Lundgaard, 1,909,875; Curtis, 1,921,865, and Barnes, 2,002,389. In each of these patents the purpose is to prevent dehydration of food in one chamber by eliminating any frosting surface [1379] in said chamber, while in the same cabinet there is a sharp freezing chamber. In each case this effect is obtained by employing a chilling element in the colder chamber and using this element to cool air which is circulated about or through the warmer chamber. It is obvious that the new claims avoid these structures by reciting two chilling units, one in each chamber and through which a volatile refrigerant is passed."

Are you familiar with the Lundgaard patent?



(Testimony of Glenn Muffly.)

A. Yes.

Q. Could you explain how it functions, briefly?

A. We have no chart on that. The Lundgaard refrigerator, and we have only this small view (displaying document to the jury), as a freezing compartment down below, and it has a cooling compartment above, the cooling compartment being identified as 46 and up the middle of that cooling compartment is a stack or passage that conducts cold air up and down back to this cooling element in the base which is contained within the compartment 41. That is the cooling portion of the system, and it is adjacent to the freezer 26-A we see in another view. Compartments adjacent to that, 26-A and 26-B in Figure 7, are freezing compartments in the base of the refrigerator, and from that cold zone air is circulated up and back without mixing with the air in the refrigerator [1380] through a flat stack that has fins on it and a little external jacket around it so that the air circulates through the fins, over the fins within the refrigerator, without mixing with the cooling air that came up, and it is explained that this is above 32 degrees. That is the vital part of it.

Q. Do you remember the details of the other two patents cited in connection with the Lundgaard patent by the Examiner, and the only question is do they correspond generally to your explanation of the Lundgaard patent?

A. Yes, they are the same general idea.

Q. I wonder if you would refer to the Lund-



(Testimony of Glenn Muffly.)

gaard patent again, and if you would read to the jury the matter appearing in the first column of Page 1 of the patent, starting, "Furthermore, the present invention is particularly effective"—which is the last line of Column 1?      A. Oh, yes.

Q. And running down to Line 74 of Column 2 of Page 1.

A. 74—no—it reads:

"Furthermore, the present invention is particularly effective in permitting the employment of low freezing temperatures in one part of a [1381] refrigerator."

Furthermore, the present invention is particularly effective in permitting the employment of low freezing temperatures in one part of a refrigerator for the preparation of ice cubes, freezing desserts, or the like, while permitting a substantially higher temperature in the food compartment without having any portion of the wall of the latter or any cooling element in direct heat transfer relation thereto at a temperature as low as freezing temperature. In other words, the food compartment may be provided with a cooler which is a relatively large heat transfer area and which therefore need not have a temperature materially lower than that at which the food compartment should be maintained; that is, substantially above freezing. Accordingly there is but little tendency for moisture to collect upon this cooler with consequent objectionable dehydration of food and there is substan-

(Testimony of Glenn Muffly.)

tially no occurrence of frost in the food compartment under normal operating conditions.”

Q. (By Mr. Ramsey): Does that describe moist cold condition in the cooling compartment?

A. It does very clearly.

Q. Now, I would like to ask you whether Lungard patent contains the following elements. Is it a household refrigerator? A. It is.

Q. Which in normal operation provides above freezing moist cold air for preserving in a refrigerated condition foods [1382] susceptible to moisture loss by evaporation? A. It has.

Q. And below freezing dry cold air?

A. Yes.

Q. And a dry cold surface for preserving foods in a frozen condition? A. Yes.

Q. Said refrigerator comprising a cabinet?

A. Yes.

Q. Having a cooling compartment?

A. Yes.

Q. And a freezing compartment? A. Yes.

Q. Thermal insulation around said compartment, thereby insulating said compartments from each other and from the outside atmosphere?

A. Yes.

Q. A cooling refrigerant expander having heat conducting surfaces within said cooling compartment?

A. That's the air circulating flue——

Q. Thank you. Constructed and arranged to maintain——

(Testimony of Glenn Muffly.)

The Court: Was your answer Yes or No?

A. A little slight differential in the use of the word "expanded"—that it's a flue in which air does flow slightly expanded. It's not an evaporator. It is in one sense an [1383] expander but it's not the kind of expander that was referred to in the patent. There is a misuse of the word "expander" in the patent. That's confusing.

Q. (By Mr. Ramsey): Does the air flow under pressure? A. Under slight pressure, yes.

Q. Is it generated by a fan? A. By a fan.

Q. Thank you. Is it constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees Fahrenheit while withdrawing heat from said compartment? A. It is.

Q. Does it have the functional result whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees Fahrenheit and is maintained at a humidity of the relative value of at least 100 degrees at 32 degrees Fahrenheit?

A. It does.

Q. Does it have a freezing refrigerant expander with heat conducting surfaces within the freezing compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature well below 32 degrees while withdrawing heat from said compartment whereby air in said freezing compartment is cooled thereby to a temperature well below 32 degrees? A. Yes; it has that. [1384]

Q. And does it have a cooling element to take care of that freezing compartment? A. Yes.

(Testimony of Glenn Muffly.)

Q. And does it have a thermostat responsive to the temperature in one of the compartments controlling the operation of that freezing apparatus?

A. Yes. It has a thermostat.

Q. Going back to Larkin, does Larkin produce, describe, teach, disclose, moist cold? A. Yes.

Q. That is in the cooling compartment?

A. Yes.

Q. And the cooling compartment is one held around 40 degrees? A. Yes.

Q. More or less? A. Yes.

Q. Is that in the household refrigerator?

A. Yes.

Q. Now, may we take a look at the Potter patent, Exhibit 118, file wrapper?

The Court: The original Potter or the reissue?

Mr. Ramsey: It's for identification, 2,219,789.

Mr. Cunningham: This is subject to my objection, your Honor.

The Court: I don't know what one he is talking about. [1385] Is this the later Potter patent which is supposed to contain admissions?

Mr. Ramsey: That is correct.

The Court: All right. It's not admitted yet. It is marked for identification.

Mr. Ramsey: That is correct.

Q. Are you familiar with this file wrapper, Mr. Muffly?

The Court: You may take your seat, if you want to, Mr. Muffly.



(Testimony of Glenn Muffly.)

(Whereupon, the witness takes the witness stand.)

Q. (By Mr. Ramsey): You are familiar, did you say, with this exhibit and its file wrapper?

A. Yes.

Q. Would you refer to that file wrapper and find, if you can find, some words defining a cooling refrigerant expander having heat conducting surfaces within a cooling compartment?

A. The drawing of this Potter patent 2,219,789 shows a coil 51 having fins 56 in the cooling compartment 41.

Q. When was the patent filed?

A. This application was filed December 29, 1936.

Q. And when was the patent in suit filed, February 15th, 1951? Some five and a half, six years later?

A. Yes.

Q. I didn't intend to break your train of thought. You [1386] might explain the similarities.

A. Yes. This—comparing this patent with the patent in suit?

Q. No. Just briefly explain how—what apparatus is disclosed in the claim—

A. This patent—maybe I should hold that up to view. I am not reading it. It's another.

Q. You are showing them United States Patent 2,219,789?

A. Right.

This is merely the drawing and it is a refrigerator having a freezing compartment at the top and main cooling compartment below and referring par-



(Testimony of Glenn Muffly.)

ticularly to Figure 2, which is the one on your right. You can see a finned coil in the lower compartment which is the cooling compartment in this case. The finned coil in the lower compartment and a refrigerated shelf up there in the freezer are shown on the drawing.

Q. What reference number is given to the finned coil?

A. The finned coil is 51, the fins are 56, and that coil is a secondary evaporator and it is associated with the secondary condenser coil 53, which is the lower one of the two coils in this shelf and——

Q. Is the finned coil shown clearly?

A. The finned coil is shown clearly, yes.

Then this shelf that contains the [1387] secondary condenser, the lower one of the two coils, also has an upper coil which is the evaporator of the primary system. And we have a similarity here in this being like Gibson and like Admiral and Amana, there being a secondary system that cools the main food compartment and the machinery is down below.

The other view, Figure 1, is similar, but not quite so easy to follow. The primary coil is the one at the right of the Figure 1, the secondary condenser is the coil in the middle. That's still within the brine tank. And the coil outside here that is marked L and 34 and 37 is the one that cools the warmer compartment, the cooling compartment of the refrigerator.

The Court: All right. Just take your seat.

(Testimony of Glenn Muffly.)

Q. (By Mr. Ramsey): In the file wrapper 118 for identification, was this Gibson patent which you have referred to cited as a reference?

A. The file wrapper of this Potter patent, yes.

Q. And that Gibson patent number is 2,073,741, as was noted then?      A. Yes.

Q. And was that cited in the first action of the examiner? I have this here. It has been?

A. I don't have it.

Q. If you want to look at it, I wish you would refer to [1388] page 25 of the file wrapper to confirm this.

The Court: Well, what do you want him to do now, Mr. Ramsey? Haven't you got some other questions you might propound to him? It's almost 12:00 o'clock. During the noon hour you can tell him what portion you want to consider.

Mr. Ramsey: That might be a very good idea.

The Court: Mr. Muffly, I wanted to ask you a question. We have been talking about finned coils, and I wasn't sure whether I understand what a finned coil is. Is this a regular coil 36 and 30? Are those coils?

A. Those are coils.

The Court: And is 51, there bars, these coils, that——

A. The fins are these vertical sheet metal attached to the horizontal running coils 51 that loop back and forth. And that is a finned coil. That's very clearly a finned coil.

The Court: I don't know if the jury all under-

(Testimony of Glenn Muffly.)

stand that. I was in doubt. They are these vertical——

A. The fins are 56 and the coil itself is 51 because that goes into the tube.

The Court: I see.

A. That goes into the tube back and forth and the fins on the coil make it a finned coil.

The Court: And they are the vertical flanges?

A. Yes. [1389]

Mr. Ramsey: Did I understand that your Honor was suggesting a break at this time?

The Court: Well, we can. This is a good time. Let's take an hour and a half for lunch.

You are now excused till 1:30.

(Whereupon, the jury was excused and the following proceedings were held out of the presence of the jury.)

The Court: Go ahead.

Mr. Cuninghame: Your Honor, I am proud to be able to give you the citation I promised you.

The Court: Fine. Give it to me now.

Mr. Cuninghame: I will give a couple of copies to our friends on the other side.

The Court: It's in a brief?

Mr. Cuninghame: Actually, I don't know. Mr. Cheatham says he signed it.

The Court: Oh, I don't care about that. Is that in connection with the inclusion of description subsequently which is disclosed in the drawings?

Mr. Cheatham: It relates to the question of how

(Testimony of Glenn Muffly.)

claims can be supported by the original disclosure. Now, that was as far as we went to find the original disclosure.

Mr. Cuninghame: We ordinarily call it late claiming.

The Court: As I understand it, the original claim here [1390] did not refer to a finned coil, that the description did not refer to a finned coil and the drawings manifest some doubt as to whether it's a finned coil that is claimed?

Mr. Cuninghame: Well, your Honor, none of the claims, even the claim in suit, expressly limit the thing to a finned coil, and it would be improper, if they did. However, as Mr. Parker has testified, and I think others have testified, the description taken with the drawing is certainly adequate to show—

The Court: How about the original description, did it provide for expanders of any kind?

Mr. Cuninghame: Expansion surfaces, coils with heat exchange surfaces or expansion, such as by fins or brine tanks. It's inherent in this description.

The Court: Well, your contention, then, would be that if they had a brine tank it would be the same?

Mr. Cuninghame: Yes, your Honor. As a matter of fact, I think the testimony, I am sure, of Mr. Bronaugh and I think Mr. Potter, they tried a brine tank and it cost too much money, something like that.

Mr. Byron: Your Honor, the only thing that this specification talks about as originally filed is

(Testimony of Glenn Muffly.)

just this. I will refer, for example, to Column 3 of the patent in suit:

“The freezing compartment or brine tank contains [1391] an expansion coil 22 and a freezing coil 22.”

The Court: Is an expansion coil the same as a finned coil or a brine tank?

Mr. Byron: No. No. An expansion coil is only a coil in which liquid expands into a vapor or for absorbing heat like in Anderson.

The Court: All right.

(Discussion off the record.)

The Court: Recess until 1:30.

(Whereupon, at 12:10 o'clock p.m. a recess was taken until 1:30 o'clock p.m.) [1392]

#### Afternoon Session

(At 1:30 o'clock p.m. the trial herein was resumed, pursuant to recess, and further proceedings herein were had as follows.)

#### GLENN MUFFLY

a witness produced by the Defendants herein, thereupon resumed the stand and was examined and testified as follows:

#### Direct Examination (Continued)

By Mr. Ramsey:

Q. Before lunch, Mr. Muffly, we were referring to Exhibit 118 for Identification. Will you refer to



(Testimony of Glenn Muffly.)

Page 27, elements 1 to 11? A. Page of what?

Q. That is of 118, that is of the Potter patent.  
Do you have 118, the file wrapper?

A. I have—yes, the file wrapper.

Q. 2,219,789. Please refer to Page 27 thereof.

(Discussion off the record.)

The Court: Can you go to anything else for a minute?

Q. (By Mr. Ramsey): Let us refer to 114-O to -R. Do you have 114-O in front of you, Mr. Muffly? A. 114-O, yes.

Q. Will you please state what that is? [1393]

A. A comparison between Claim 1 of the accused refrigerators and prior Anderson patent.

Q. Was this not prepared by you or under your direction? A. Yes.

Q. Would you first go through the elements as I read them to you to see whether they are all present in Anderson. One, a cabinet? A. Yes.

Q. Two, a cooling compartment? A. Yes.

Q. Three, a freezing compartment?

A. Yes.

Q. Four, thermal insulation around the compartments thermally insulating said compartments from each other and from the outside atmosphere, said air and said cooling compartments having a substantially stable temperature and a relative humidity of 100 per cent at 32 degrees F.? A. Yes.

Q. Air in the freezing compartment having a temperature well below 32 degrees F.?

(Testimony of Glenn Muffly.)

A. Yes.

Q. A cooling refrigerant expander having heat-conducting surfaces within said cooling compartment constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment to maintain said air in said cooling [1394] compartment at substantially stable temperatures?

A. We have "Yes" under Anderson.

Q. These are all related to Anderson?

A. Yes.

Q. A freezing refrigerant expander having heat-conducting surfaces within said freezing compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature well below 32 degrees F. while withdrawing heat from said compartment? A. Yes.

Q. Volatile refrigerant in said expanders?

A. Yes.

Q. A single liquefying unit associated with said expanders and constructed and arranged to contain refrigerant expanded by heat extracted from both said compartments? A. Yes.

Q. A volatile refrigerant circulating through said expanders being the sole heat-extracting medium? A. Yes.

Q. A thermostat responsive to the temperature in one of said compartments controlling the operation of said liquefying unit? A. Yes.

Q. You have answer "Yes" to each of the elements of Claim 1? [1395]

(Testimony of Glenn Muffly.)

A. Yes, each one of Anderson.

Q. Now referring to the Admiral and Amana refrigerators, which are the accused devices, which ones are missing there?      A. No. 5.

Q. What is No. 5?

A. Air in said cooling compartment having a substantially stable temperature of about 40 degrees F., and having a humidity whose relative value is at least 100 per cent at 32 degrees F. I have "No" under each, Admiral and Amana.

Q. Any others?

A. No. 7, a cooling refrigerant expander, having heat-conducting surfaces within said cooling compartment constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment to maintain said air in said cooling compartment at a substantially stable temperature. That I have put "No" under both Admiral and Amana, and the next one, No. 8, a freezing refrigerant expander having heat-conducting surfaces within said freezing compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature well below 32 degrees F. while withdrawing heat from said compartment," again I have "No" under each, Admiral and Amana.

"And No. 10, a single liquefying unit associated with said expanders constructed and arranged to contain [1396] refrigerant expanded by heat extracted by said expanders from both said compart-

(Testimony of Glenn Muffly.)

ments, the volatile refrigerant circulating through said compartments being the sole heat-extracting medium." "No" under both Admiral and Amana.

Q. Will you next refer to 114-P?

A. I have it.

Q. Is that a similar treatment of Claim 2, the patent in suit?      A. It is.

Q. Do you find all of the elements—do you or do you not find all of the elements in Claim 2 present in Anderson?

A. They are all present in Anderson.

Q. Now, referring to Admiral and Amana structures, which ones do you find absent, if you find any absent?

A. These are missing, Items 5, 6, 8 and 9.

Q. Those might be meaningless if the jury did not have that list before them.

The Court: Are those the same that you have read just a minute ago?

The Witness: I think I had probably better read them.

Mr. Byron: Answer the question.

The Witness: They are now quite identical here.

Q. (By Mr. Ramsey): Except for air, are they identical?

A. They are substantially the same features, wording of the claim 1. There is a slight difference in wording here. [1397]

Q. Will you next refer to 114-Q? Is this Claim 3 of the patent in suit?      A. Claim 3; yes.

Q. How does Claim 3 differ from Claim 1?



(Testimony of Glenn Muffly.)

A. In having the further specification of the thermal insulation around the cooling compartment and so on at the end of the claim.

Q. Is that No. 12?      A. Item No. 12; yes.

Q. Would you please read that?

A. A thermostat responsive to the temperature in said cooling compartment and controlling the on-off cycles in said liquefying unit in response to variation of said temperature and the thermal insulation around said cooling compartment offering less resistance to flow of heat thereto from the outside atmosphere than does the thermal insulation of the freezing compartment to insure starting of said liquefying unit by heat flow into said cooling compartment during an off cycle of said liquefying unit before the temperature of said freezing compartment approaches a non-freezing value.

Q. Do you find that present in Anderson?

A. Yes.

Q. Do you find it present in the accused devices, Admiral and Amana? [1398]

A. No, not in either of them.

Q. Would you next refer to Exhibit 114-R?

A. I have it.

Q. How does it differ from Claim 2 of the patent in suit?

A. In the same manner that Claim 3 differs from Claim 1, this addition that I have just read.

Q. Do you find Element 10, as you have identified it, present in the Anderson patent?

A. Yes.



(Testimony of Glenn Muffly.)

Q. Do you find it present in the accused devices, Admiral and Amana?

A. No, not in either.

The Court: What were you referring to, then? What is that exhibit?

The Witness: This is 114-R.

The Court: To what does it refer?

The Witness: It refers to Claim 4 as applied to the Anderson and the accused refrigerators, entitled, "Comparison Between Claim 4 Accused Refrigerators and Prior Anderson Patent."

The Court: As I understand it, Claim 2 is the broadest claim; is that right?

Mr. Anderson: Yes.

The Witness: Yes.

Mr. Ramsey: That is agreed by both sides, if the Court [1399] please.

The Court: Is Claim 2 similar to Claim 4?

The Witness: Yes.

The Court: Claim 1 is similar to Claim 3?

The Witness: Yes, but there is another difference in which 3 and 4 include this final longer wording about thermal insulation.

The Court: 1 and 2 are similar, and 3 and 4 are similar?

The Witness: Yes, with respect to this insulation part.

The Court: The difference between 1 and 2 and 3 and 4 is that it has another limiting factor, the thermal insulation; is that right?

A. Yes.

(Testimony of Glenn Muffly.)

The Court: So if Claim No. 2 is infringed, all of them are infringed?

Mr. Byron: No.

Mr. Ramsey: No.

Mr. Cuninghame: I think your Honor is right. That is our theory of it.

Mr. Ramsey: No; the narrower claims might not be infringed, but I think that more or less it stems—generally, from what we had, it is our contention that none of them are valid. Claim 2 is broader. If Claim 2 is anticipated or invalid, all of them are; stating just the opposite. [1400]

The Court: If Claim 2 is invalid, all of them are invalid, but even if Claim 2 is not infringed the more limited claims may be infringed?

Mr. Byron: May I explain that, your Honor?

Mr. Cuninghame: Your Honor, I think we are all mixed up.

Mr. Byron: Let me straighten it up.

The Court: All right, Mr. Byron, you try it, and then if Mr. Cuninghame is not satisfied with your explanation, we are going to give him an opportunity.

Mr. Byron: Fine. There are four claims in suit. Claim 2 we agreed is the broadest claim. That means the other three claims are more limited in scope. Now, if Claim 2 were infringed, all of the claims would be infringed, and if, let us say, that Claims 1, 3 and 4, which are narrower in scope, have more limitations, may not be infringed at all, even though Claim 2 were infringed, now it is more

(Testimony of Glenn Muffly.)

difficult to infringe a narrower claim with more elements in it, more qualifications, and it is more difficult to invalidate a narrower claim, and it is easier to invalidate a broad claim such as 2. I think that explains it, does it not?

Mr. Cuningham: Yes; I think you misspoke, Mr. Byron.

Mr. Byron: Maybe I did.

Mr. Cuningham: If the narrowest claims are infringed, [1401] then obviously the broadest ones are.

The Court: Yes.

Mr. Cuningham: It is not the reverse. I think that was his only slip.

Mr. Byron: Yes.

Mr. Cuningham: Otherwise, I agree wholeheartedly with what he said.

The Court: Do you also agree that 1 and 2 are almost identical, and 3 and 4 are almost identical?

Mr. Cuningham: Yes, sir; and, further, to compare the two broader with the two narrower ones, 1 is like 3, and 2 is like 4. [1402]

The Court: 2 and 4 are broader.

Mr. Cuningham: 3 and 4 are the narrowest ones and 2 are the broadest. But they have their correlatives. I think you will see what I mean in the reference to air, your Honor, in Claim 2 and in Claim 4. That——

The Court: Well, I thought that 3 and 4 were like 1 and 2 except for the thermal insulation in 3 and 4.

(Testimony of Glenn Muffly.)

Mr. Cunningham: That's correct, sir.

Mr. Byron: Correct.

Mr. Ramsey: Maybe I can take a whirl at it. 3 and 4 have the additional limitation of the relative insulation. Claim 1 and Claim 3 include positively air as an element of the claim.

The Court: All right. Well, that is the reason I asked Mr. Muffly a question because I didn't understand it. Is it more clear to the members of the jury now?

(Whereupon, the jurors nod their assent.)

The Court: I want to commend you on your patience in this case. I know how difficult this is. From time to time we are getting into technical discussions, but this case means much to all the parties concerned and we are on the last week and you have done a good job so far. So keep up the good work and listen carefully to all the testimony.

Q. (By Mr. Ramsey): Now, do you have 118 for identification, Mr. Muffly? [1403]

A. Yes. It's here.

Q. The file wrapper? I wonder if you would refer to page 27 thereof? Are you familiar with the claims in that patent and to which these remarks refer?

A. Yes, I have them.

Q. Do they cover substantially the same or similar organization to those referred to in the claims in the patent in suit?

A. This—we are speaking of the Potter 21,9—

(Testimony of Glenn Muffly.)

Q. That is correct; and the claim in the file wrapper that his remarks relate to.

Mr. Cuningham: I'm sorry. I'm confused. Are you talking about claims in the file wrapper and, if so, what claims?

Mr. Ramsey: The ones that precede page 27 in the file wrapper.

Mr. Cuningham: These are not the claims in the issued patent?

Mr. Ramsey: That is right.

Mr. Cuningham: And can you give me the numbers of them?

Mr. Ramsey: Do you have the file wrapper?

Mr. Cuningham: I have a digest of it. I should be able to get them from the digest.

Q. (By Mr. Ramsey): What action is it, Mr. Muffly, and what date?

A. The action on page 27 is the second page of an action— [1404] no—an amendment.

Q. The date of the amendment?

A. October 21st, 1937.

Mr. Cuningham: October 21st, 1937.

The Court: Is this a construction by Potter in connection with some action taken by the examiner?

Mr. Ramsey: That is correct.

Mr. Cuningham: This is in that much later patent——

The Court: Yes. That's right.

Mr. Cuningham: Well, I think I found October——



(Testimony of Glenn Muffly.)

The Court: As I understand it, this is being read for an admission?

Mr. Ramsey: That's correct.

The Court: —by Potter in connection with this later patent?

Mr. Ramsey: And particularly as to location of this cooling evaporator within.

The Court: All right.

Mr. Ramsey: Within the cooling compartment.

The Court: Go ahead.

Q. (By Mr. Ramsey): Would you please read Lines 1 to 11 in that amendment?

Mr. Cuninghame: In the remarks?

The Witness: On page 27?

Mr. Ramsey: That's correct. [1405]

The Witness: Starting at the top of the page?

Mr. Ramsey: Top of the page, yes.

The Witness: "The applicant is not broadly claiming that the use of fins on the boiler but is claiming a novel combination in which the finned boiler forms a part. Regardless of the function which may be performed by the Gibson refrigerator the patent does not disclose the structure used by the applicant. Applicant's structure is materially simpler than that of Gibson who uses the entire inside shell of the refrigerant compartment for transmitting heat to the refrigerant pipes which encircle it. Obviously Gibson does not have a secondary boiler in the food compartment and obviously Baird has nothing corresponding to the sharp freezing compartment."

(Testimony of Glenn Muffly.)

Q. (By Mr. Ramsey): Now, would you read Lines 15 to 17, the same page?

A. "Like Claim 2, Claim 7 recites the fact that the portion of the refrigerant circuit which lies within the food chamber is formed with heat radiating fins."

Q. Now, would you refer to page 41 of the file wrapper, and will you identify it with an amendment date?

Mr. Cuninghame: By date, please. I don't have the [1406] page.

Mr. Ramsey: I asked for the date.

The Witness: An amendment received at the patent office April 25th.

Mr. Cuninghame: What year?

The Witness: Just a minute, '39—and making various amendments, specifications, and claims, and we come over to the remarks beginning on page 40. You asked me about page 41?

Mr. Ramsey: Commencing at Line 21.

A. Which is a continuation of the remarks.

Q. And will you read that?

A. That starts: "A combination of these"?

Q. That is correct.

A. "A combination of these references does not produce applicants' invention. Gibson discloses a refrigerator in which practically the entire wall area is a refrigerating surface with a large area uniformly exposed. There is practically no direct circulation of air and this condition when food is left in the food compartment for a considerable

(Testimony of Glenn Muffly.)

period of time while the temperature of the food may be maintained within refrigerating limits has the effect of stagnant air. Actual physical tests in applicants' laboratories with a food chamber [1407] of this type filled with food and sealed for a week and with a food chamber provided with a finned coil for cooling filled with identical food and sealed for a week showed that with the finned coil there is obtained a definite circulation of air and that this definite circulation of air on actual tests produces a better food preservation effect."

Q. Going ahead to the Line 21 on Page 42.

A. Yes.

"It was found that food sealed up for a week in a chamber where definite circulation of air was obtained and is obtained through the use of a finned coil showed marked superiority over food that was sealed up for the same length of time in the more stagnant cabinet. Some of the food in the stagnant air cabinet showed a large cover of mold while there was no mold shown in the cabinet built according to applicants' system. Air conditioning means control of temperature, control of humidity, and control of circulation. All these three things are essential in order that the system may come under the term 'air conditioning.' These three elements are necessary [1408] in the right proportion to obtain the maximum values in food preservation when food is preserved at temperatures above 32 degrees F. Food kept in covered containers, in other words, food that is protected against circulating

(Testimony of Glenn Muffly.)

air, grows bacteria at an increased rate because of non-circulating air.”

Claim 13——

The Court: How long are you going to read?

Mr. Byron: Five more lines.

The Witness: Six more lines.

The Court: Mr. Ramsey, you shouldn't have had this witness read this. This exhibit is not in evidence. You can't be asking this man to read it. You have to establish that he made an admission before the witness can read. If I permitted this sort of thing to be done I wouldn't have to admit any exhibits. The witness would just read it.

Mr. Ramsey: I was only trying to establish the admission.

The Court: Well, you don't establish the admission by the very document that you are asking to be introduced for the purpose of showing the admission.

Mr. Ramsey: It would be objectionable if I asked him to summarize it. I don't want to——

The Court: I think that's about the only way you are going to be able to do it. But now that he is down to the [1409] last five lines, let him continue. But don't do that any more.

The Witness: Should I read the rest?

The Court: Go ahead.

The Witness: “Claim 13 therefore clearly distinguishes from the patent to Gibson or Gibson taken in connection with Gase as the evaporator for the food chamber in Gibson is not so con-



(Testimony of Glenn Muffly.)

structed that it may occupy a certain predetermined definite confined space within the food compartment causing proper circulation of air which is one of the three elements necessary to provide air conditioning.”

Q. (By Mr. Ramsey): Now, Mr. Muffly, is this patent issued to Thomas Irving Potter?

A. Yes.

Q. And could you explain what it is he is representing to the patent office with regard to the Gibson patent?

A. That the Gibson patent——

Mr. Cuningham: If your Honor please, I think the words speak for themselves.

The Court: I don't understand what they mean.

Mr. Cuningham: Well——

The Court: I don't think the jury does, either, unless they understand a lot more than I do, and I don't believe they do, either. So that's the purpose of an expert on this [1410] particular thing. I think this is what he should have done in the first place. I am going to permit the witness to answer.

Q. (By Mr. Ramsey): Would it be helpful to you to refer to 114-G?      A. Which is——

Mr. Ramsey: It's being brought up to you now. You have previously identified it.

A. The question was?

Q. (By Mr. Ramsey): What is the applicant at this point representing to the patent office to secure a patent?



(Testimony of Glenn Muffly.)

A. Representing that the refrigerator shown in Gibson Reissue 21,941, which is the reissue of the reference referred to there, having a cooling coil around the liner of the food compartment instead of having the finned coil within the compartment as shown in Potter Patent 2,219,789 does not produce the same effect and does not cause the circulation of air which is produced by this finned coil, and that foods will spoil in the Gibson refrigerator whereas they keep in Mr. Potter's refrigerator.

Q. What sort of a cooling element is shown in Gibson?

A. The cooling element of the cooling compartment.

Q. Is that a cold wall type?

A. That's a cold wall type. The secondary evaporator is wrapped around the liner of the cooling compartment as it is [1411] in Admiral, shown at the right of the same sheet.

Q. Is that a cold wall type?

A. That is a cold wall type.

Q. Now, what is he saying about the necessity of having this cooling coil within the compartment?

A. He says it's necessary and that obviously Gibson is not within the compartment.

Q. And now, what about the two accused structures following that same line of argument?

A. That same line of argument would say that obviously the coil is not within either the Admiral or the Amana.

Mr. Byron: Cooling—

(Testimony of Glenn Muffly.)

The Witness: Cooling compartment.

Q. (By Mr. Ramsey): Mr. Muffly, one thing that might be helpful to the jury: Why does he say they are different with regard to air circulation?

Mr. Cuninghame: I object; calling for the operation of his mind—Potter's mind.

Q. (By Mr. Ramsey): What does he say, then?

The Court: All right. Go ahead.

Q. (By Mr. Ramsey): Can you tell us, Mr. Muffly?

The Court: What does he say, in simple language, Mr. Muffly?

The Witness: Does Mr. Potter say?

The Court: Yes. [1412]

Mr. Ramsey: Yes.

The Witness: He says that the Gibson patent plan of wrapping it around the outside is no good; that he with his finned coil inside of the compartment accomplishes a result which Gibson cannot accomplish.

Q. And what is that?

Mr. Cuninghame: Is he quoting now?

Mr. Byron: No.

The Court: I asked him to state in simple language what Mr. Potter contends, the reasons why he says that his is better.

Mr. Cuninghame: I object to it as a misquotation of what Mr. Potter says.

The Court: Well, you will have an opportunity of putting Mr. Parker on the stand on cross-examination.

(Testimony of Glenn Muffly.)

Mr. Cuninghame: Mr. Parker wouldn't know a thing of what Mr. Potter said.

The Court: He can read that in the file wrapper also.

Q. (By Mr. Ramsey): Considering that "within" and you say it will not work. Now, why does he say it will not work with regard to air circulation or air conditioning, as he calls it?

A. He says that the air in the Gibson refrigerator which is like the Admiral and the Amana will be stagnant; that it will not have the proper circulation; that it will not properly preserve the foods; that they will collect mold [1413] because of having this coil on the outside instead of the inside.

The Court: I think we are going far afield.

Mr. Cuninghame: Thank you, your Honor.

The Court: I think that I understood the purpose of this exhibit was to show that the cooling compartment consisted of that portion of the box in which Mr. Muffly previously put his hand. That is inside where you put the food. Is that right?

Mr. Byron: There is another point, your Honor. To establish infringement we have discussed that there must be three identities and one of those identities is substantial identity of result. Now, in taking up these arguments made by Mr. Potter against the Gibson patent, as a reference he says Gibson cannot get these results because the coils are wrapped around the cooling compartment and, therefore, there will not be the circulation of air in the cooling compartment, whereas Mr. Potter,

(Testimony of Glenn Muffly.)

where he has the finned coil within the cooling compartment, he does get a circulation of air and where you do get a circulation of air, he says there will be no mold. If you don't have a circulation of air there will be no mold.

The Court: Well, I don't think that's admissible, Mr. Byron, for this reason: He was never qualified as an expert. Mr. Potter is not an expert and nobody claims he is, [1414] and, therefore, you can't use what he says about an engineering subject as evidence.

The question is, is it true or not, that's the ultimate question? But you can, it is admissible, as I previously pointed out, to show what he envisages a cooling compartment to contain. He didn't define it in his original patent, and, therefore, you can show that at a later time when he uses these words he must have meant the inside and not the outside.

It's admissible for that purpose, but I don't think it's admissible for any other purpose because——

Mr. Byron: That's substantially the same thing. I had it in different words, your Honor, that's all.

Mr. Ramsey: I do offer it and with this additional thing, which might be another facet of the same problem, it is interpretation of the words "within the compartment." Used in the same environment.

The Court: Well, it's admissible for that purpose but it's not admissible whether the air stagnates or doesn't stagnate, because Potter is not an expert.



(Testimony of Glenn Muffly.)

Mr. Ramsey: Is it admitted?

The Court: It's admitted.

(File wrapper, Potter Patent 2,219,789, previously marked for identification, was received in evidence as Defendants' [1415] Exhibit 118.)

Mr. Byron: Is that Exhibit 118?

Mr. Ramsey: Yes.

I wonder if you would have the file wrapper of the reissue patent, which is Exhibit 102, before you, Mr. Muffly?

A. I have 102, the file wrapper of the Reissue Patent 23—— [1416]

Q. Would you refer to Page 62 thereof which is the final amendment dated November 12, 1948. This appears in about the middle of the argument.

The Witness: Paragraph starting, "As further——"

Q. It is the first paragraph, and may I read this to you?

"Furthermore, the elements——"

This is Potter's final argument in the reissue patent in suit to urge these reissue claims.

He says:

"Furthermore, the elements expressed in the reissue claims do not cover all ways by which the results of the Potter, et al., invention could be accomplished. Thus, for example, a two-temperature refrigerator can be built which does not utilize volatile refrigerant expanders, or does not use a single compressor, or does not utilize in its cooling



(Testimony of Glenn Muffly.)

compartment an expander whose surface temperature is always above 32 degrees F. Such refrigerators would not infringe the present claims. We point this out to show further that the elements in the claims are described with definiteness and in terms of their structure."

Now, with that in mind, Mr. Muffly, do you find in the accused devices an expander in the cooling compartment? [1417]      A. No.

Q. Do you find an expander whose surface temperature is always above 32 degrees F.?

A. No.

Q. At what temperature do the cooling compartment walls, that is, the inner surfaces of the liner, stand during operation temperaturewise?

A. They will pass the freezing point, ice, somewhat. At one setting of the control they can cyclically defrost, and the coil back outside of it is still colder and vary according to the thermostat setting, may go down to 25 degrees or colder.

Q. Were you in the courtroom when Mr. Parker was on the stand and said that a part, a part that he construed the cooling expander or evaporator in the accused devices were the primary coil of the heat transfer plates?      A. I heard that.

Q. What temperature do they stand at during operation?

A. They will go far below zero at times. Their evaporative compressors——

Q. During operation?

(Testimony of Glenn Muffly.)

A. During operation they will go down to 10 below zero, maybe lower.

Q. Then he attempted to connect up those sub-zero coils [1418] as a part of a cooling evaporator, cooling compartment evaporator or cooling coil, with the secondary coils of the accused devices. At what temperature do the cooling coils of the secondary stand during operation?

A. They are the coils surrounding the cooling compartment, and they may be from 20 to 25 degrees.

Q. Thank you. Now, will you refer to Page 65 which is a part of this same amendment, and about the middle of the page. It is a sentence, and I will read it to you:

“The description of the expander in the cooling compartment being constructed and arranged to operate at a surface temperature above 32 degrees F. is definite and when read in the light of the patent specification a person skilled in the art would have no difficulty in arriving at the proper proportions.”

With that in mind, do you find in the specification any description whatsoever of the coil 25 except by the number and by calling it 25?

A. No, there is no definition or description.

Q. Do you find in the specification any teaching of proportions?           A. No.

Q. Do you find in the specification any mention of temperature or humidity controlled by reason of

(Testimony of Glenn Muffly.)

the structure of [1419] said coil 25 in the patent in suit?

A. In the patent in suit, their wording concerning the temperature and humidity of the air, but nothing——

Q. Do you find——

Mr. Cunningham: Objection, your Honor. Let him finish his answer.

Mr. Ramsey: Are you finished?

The Witness: No—well, that is all right; go ahead.

Mr. Ramsey: I did not intend to interrupt you. I just asked you if your answer was finished.

A. I found—mentioned the air, but I found nothing that refers to the structure necessary or used to accomplish such a result.

Q. You are now referring to the structure of the coil No. 25 of the patent in suit?      A. Yes.

Q. You have considered and discussed in some length the coil in the Larkin patent. Do you find there a description teaching proportion and construction?      A. Yes.

Q. I wonder if you would step down past this refrigerator which is the accused refrigerator 10-A. Would you point to the control knob used by the householder which is for the moist cold?

A. This knob at the right has a dial which rotates, which [1420] has an arrow pointing “Colder” to turn clockwise; “Warmer” as we turn counter-clockwise; “N” for normal in the middle, and if we turn it halfway around it says “Off.”

(Testimony of Glenn Muffly.)

Q. Now, "Normal" appears if we consider like the face of a clock at 12:00 o'clock?

A. The "N" standing for normal is at 12:00 o'clock. That is, when it is set at normal the "N" is at the top of the dial.

Q. I ask you to consider, and I do not know the exhibit number, but it is the manual of the Admiral Corporation, the blue one.

Mr. Byron: Plaintiff's Exhibit 4-CC-2.

(Discussion off the record.)

The Court: Is there any reason why he should not use one of those (indicating copies of manual)?

Mr. Ramsey: Would you agree that is one of them, Mr. Cunningham?

Mr. Cunningham: That is one of those.

Mr. Ramsey: You have no objection?

Mr. Cunningham: No; go ahead.

The Court: Go ahead.

Q. (By Mr. Ramsey): Do you understand the design and operation of the Admiral refrigerator?

A. Yes.

Q. On which you have just pointed out to the jury the location [1421] of the control knobs?

A. Yes.

Q. I ask you to turn in that manual to Page 52 and the paragraph marked F. Do you find that?

A. Yes.

Q. May I read to you:

"The Moist Cold compartment in Model 1090 and 1390 Dual-Temp refrigerators will not ice up when

(Testimony of Glenn Muffly.)

used at sea level if the temperature controls are correctly calibrated except possibly when both controls are turned practically to the maximum cold positions.

“The Moist Cold compartment in Model 1191 Dual-Temp refrigerators is designed so that ice forms on the walls when the compressor is running and thaws when the compressor is not running with the Moist Cold Temperature Control set at ‘Normal.’ In other words, it is designed for a ‘Freeze and Thaw’ cycle. Consequently, icing in this model is normal unless it does not thaw during the off cycle. However, too much ice (ice does not thaw and continues to build up) is an abnormal condition and should be checked as outlined in the following paragraphs. [1422]

“Due to minor differences in production parts in Models 1090 and 1390, you may receive an occasional complaint of ice formation with the Moist Cold control at ‘Normal,’ and a complaint of ice build-up in Model 1191. In such cases, you can check the control calibration and replace the control if necessary, but most of these complaints can be handled by instructing the consumer to turn the Moist Cold temperature control towards the warmer side enough to prevent icing. Explain to the consumer that icing condition is proof that the refrigeration mechanism is in excellent order since it is capable of maintaining lower wall temperatures than necessary.”



(Testimony of Glenn Muffly.)

Would you explain to the jury what temperatures are attained in the surface of the liner when that is moved from "Normal" clockwise towards the colder side?

A. That would bring the liner temperature down to this point where the icing would last over until the next cycle; not defrosting each cycle.

Q. What would happen if that were turned to, say, about 3:00 o'clock?

A. That would be an intermediate point, probably more icing; not necessarily icing over to last through the cycle. [1423]

Q. When ice forms on the liner, does this, or does the accused device or devices—does that indicate that a temperature below 32 degrees F. is attained? A. Yes, definitely.

Q. Would that be the condition that exists in which the applicants state is outside of their patent and would not be an infringement? A. Yes.

Mr. Ramsey: You may cross-examine.

### Cross-Examination

By Mr. Cuninghame:

Q. What, in your opinion and with your background of over a hundred thousand patents, is the closest prior art patent to the patent in this case?

A. There are so many that that is very difficult to select one. Anderson——

Q. You had no difficulty with——

Mr. Ramsey: Wait; let him finish his answer.

(Testimony of Glenn Muffly.)

Mr. Cuningham: I would like an answer to the question.

The Witness: All right; we have Anderson.

Q. (By Mr. Cuningham): Is that the closest prior art patent?

A. We are talking about those that are here.

Q. No, of all you know about. The number of that patent is 1,439,051. [1424]

A. That is the one we selected to use here.

Q. Thank you. Did you, Mr. Muffly, write an article in a publication entitled "Ice and Refrigeration" of July, 1941, and I show you the only photostatic copy of that that I have.

The Court: Has it been identified?

Mr. Cuningham: No, it is a publication—I plead guilty; I found it in my papers.

Mr. Byron: We object to that now, your Honor.

Mr. Cuningham: I did not intend to offer it in evidence. I would like to get his agreement to a statement in it, however, that he wrote, acknowledgement that he wrote it. I would like to have it marked, and if I had realized that I had it——

The Court: I am going to let you do it this time. Mark it.

Mr. Cunningham, our rules provide no surprises, and you are supposed to have this marked before counsel for the other side. I will permit this one if you say you have been surprised by anything Mr. Muffly has said.

(Photostatic copy of document referred to marked Plaintiff's Exhibit 23 for Identification.)

(Testimony of Glenn Muffly.)

The Court: Did you write that article, Mr. Muffly?

The Witness: It has my name at the top. I am just [1425] looking to see which article it is.

Mr. Cuningham: It has your picture on it.

A. Yes, yes, obviously my article.

Mr. Cuningham: I offer it in evidence, your Honor.

The Court: You said you did not want to offer it; you just wanted to find out whether he agreed or did not.

Mr. Cuningham: I offered it because I thought—I really—I just wanted to get one statement in. I will withdraw the offer, your Honor. I think it does encumber the record.

The Court: Give it back to him and ask him if he agrees with the statement.

Q. On Page 42 under the subdivision of this article which bears the title, "1930-1935"—

The Witness: The date of the publication, please?

Q. I beg your pardon?

A. The date of this publication, what is this?

Mr. Cuningham: It is "Ice and Refrigeration," July, 1941, Mr. Muffly.

A. July, 1941.

Q. Perhaps I should state this about it. It is entitled, and I quote, "Twenty-Five Years of Household Electric Refrigerator Development," by Glenn Muffly, Consulting Engineer, Springfield, Ohio. It starts on Page 38 of that magazine and

(Testimony of Glenn Muffly.)

apparently runs through to Page 44, and on [1426] Page 42 I read the following, and that is under the subdivision 1930-1935. This is a five-year subdivision period on a 25-year coverage of the history of the art.      A. Yes.

Q. "Some manufactureres went so far as to supply a separately insulated space in which frozen foods might be kept in larger packages than would go into the ice tray space. This called for two evaporators, one at a low temperature with the frozen food compartment, and one at a non-frosting temperature or operated on a defrosted cycle for the main food space which was thereby held at a higher humidity. This is a trend of which we will hear a lot more."

Do you recall writing those words?

A. I don't recall writing them, but it sounds like something I might have said.

Q. Well, you tell us, subject to any correction that I read, the right words in your recollection.

A. I advocated that sort of design ten years earlier than this.

Mr. Cuningham: Now, if your Honor please, just one more quotation on the same page, and this is under the heading "1941 and the Future." [1427]

Mr. Cuningham: Now, if your Honor please, just one more quotation on the same page, and this is under the heading: "1941 And The Future," and I quote:

"Probably the biggest trend this year is in the direction of two-zone refrigerators which provide a

(Testimony of Glenn Muffly.)

place for storing frozen foods. All manufacturers talk as if they had this and some really do have it. The trend is in the direction of what amounts to a small very low temperature refrigerator located inside of a larger refrigerator in which the cooling surface is held above freezing so as to prevent the accumulation of frost and the dehydration of cabinet air. In a few years a refrigerator in which frost is visible when you open its outer door will look like an automobile with a starting crank hanging on the front."

Your witness. That concludes my cross-examination.

The Court: The jury is instructed to disregard the remarks because it wasn't an impeaching statement.

Mr. Ramsey: Defendant rests.

Mr. Cunningham: If your Honor please, we had expected to have two other witnesses, as I previously announced. I don't know that we are prepared to go ahead with Mr. Parker at this stage. We counted on this evening for it. [1428]

The Court: How many witnesses do you propose to call in rebuttal now?

Mr. Cunningham: Just Mr. Parker, your Honor.

The Court: Just Mr. Parker.

Mr. Cunningham: By the way, he got in at 4:00 o'clock this morning.

The Court: We are not going to rush Mr. Parker. We are going to give you all the opportunities to prepare your case.



(Testimony of Glenn Muffy.)

How long will Mr. Parker take?

Mr. Cheatham: I believe somewhere between a half hour and three-quarters of an hour.

The Court: All right.

Now, I will tell you what I am going to do. I am going to recess this case until tomorrow morning to give you an opportunity of putting Mr. Parker on, with the understanding, however, that argument will follow Mr. Parker's testimony.

Mr. Cuningham: All right.

The Court: Now, according to our original plans, neither side can take more than two hours in argument. In other words, I am not urging anyone to speak for two hours, but that is the maximum time than can be taken.

Mr. Cuningham, if you are going to do the arguing on behalf of the plaintiff you can split your time up any [1429] way you want, except that you may not take or reserve more than half your time for rebuttal.

In other words, if you speak less than an hour on your opening you will only get an hour on your closing, and both arguments need not be made by you, but Mr. Cheatham can make any argument at any time he wants. You can give him any time you want.

As far as the defendants are concerned, you can split up amongst the four of you any time you want, as long as it doesn't take more than two hours.

Ladies and gentlemen of the jury, I think it's

(Testimony of Glenn Muffly.)

best that we give Mr. Parker an opportunity to go over the evidence. I think we will take a lot less time. I am not going to instruct you as to the law until Thursday morning at about 9:30. I don't want to instruct you tomorrow at 4:00 o'clock or 5:00 o'clock in the afternoon, which might take us up to about 6:00 o'clock before you go out. This way you are going to have plenty of opportunity to discuss the case and come to a conclusion, I hope, by a reasonable hour.

Now, on that day I would like to have you here about 9:30 and we will finish the instructions by about 11:00 o'clock.

(Discussion held off the record.)

(Witness excused.) [1430]

The Court: All right. I need not tell you this, but please keep an open mind. I assume that you are all going to do that and you are excused until 10:00 o'clock tomorrow morning.

(Whereupon the jury was excused.)

(Whereupon proceedings were had but not reported.)

(Whereupon, at 2:45 o'clock p.m., an adjournment was taken until 10:00 o'clock a.m., Wednesday, November 30, 1955.) [1431]

Wednesday, November 30, 1955, 10:00 A.M.

proceedings herein were resumed pursuant to adjournment, as follows:

The Court: Mr. Parker, I understand you are going to testify.

NORMAN S. PARKER

was thereupon recalled in rebuttal as a witness in behalf of plaintiff, and, having been previously sworn, testified as follows:

Direct Examination

By Mr. Cheatham:

Q. Mr. Parker, have you familiarized yourself with Defendants' Exhibits 114-A and 114-B, which are these colored charts entitled "Claim 2 Does Not Read on Admiral" and "Claim 4 Does Not Read on Admiral"?      A. Yes.

Mr. Cheatham: I would like to pass these to you.

(Whereupon the Crier hands two charts to the witness.)

Q. (By Mr. Cheatham): I would like to have you comment with respect to Item 5 on 114-A and give us your opinion as to the correctness of that conclusion as shown on that chart.

A. In this chart I might say for clarification of what I am going to say that at the right-hand of the chart or exhibit [1432] there is a reproduction

(Testimony of Norman S. Parker.)

of the drawings of the patent in suit. At the left side is a somewhat diagrammatic drawing showing—labeled “Admiral.” In between the Claim 2 is parsed or broken into components and along the margin of this quotation from the claim is a series of comments.

For the first four items no comment is indicated. These comments are between the ones—the ones I am alluding to are between the diagram of the Admiral device and the quotations from the claim. The Item 5 about which you asked reads: “A cooling refrigerant expander having heat conducting surfaces within said cooling compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees F. and is maintained at a humidity whose relative value is at least 100 per cent at 32 degrees F.”

That part of the claim which I have quoted is in this parsing in the middle of the exhibit, broken up into four paragraphs or four separated spaced bits. The top one——

The Court: Mr. Parker, I don't want to interrupt you, but I think it would be much more effective if you would have that exhibit brought out to the jury. They have a blown-up copy. [1433]

Mr. Cheatham: Thank you, your Honor.



(Testimony of Norman S. Parker.)

(Whereupon the blown-up chart was placed on the easel in view of the jury.)

Mr. Cheatham: 114-A.

The Witness: The part 5 as I quoted is about in the middle of the chart. At the first subdivision which was talked about, I believe, by Mr. Muffly, "A cooling refrigerant expander," no comment.

Then in the second subdivision, "Heat conducting surfaces within said cooling compartment" and opposite that is the word "No." Then there is a bracket of two parts, the first of which, "constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees Fahrenheit while withdrawing heat from said compartment." Opposite that is a statement "No. Is a function of thermostat." Then below is a statement which is part of the bracket and opposite this there is no comment, "whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees Fahrenheit and is maintained at a humidity whose relative value is at least 100 per cent at 32 degrees F."

Now, where Mr. Muffly and I completely differ in our interpretation of the language of the claim is that Mr. Muffly feels that this language has to—that this language of the claim, if I understand Mr. Muffly correctly, [1434] can only be satisfied if the duct or the part of the expander in which the refrigerant evaporates is also in the storage space. I



(Testimony of Norman S. Parker.)

do not so read the claim and to me the language does not require it. What the language says is that "a cooling refrigerant expander has heat conducting surfaces within the cooling compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment."

To me, that notation of the claim is completely satisfied by the Admiral structure because the liner in the compartment has a heat conducting surface and that heat conducting surface is subjected to the heat of the material to be refrigerated. If any food is put in the cooling compartment it is surrounded by this heat conducting surface, and the heat conducting surface which is in the cooling compartment accepts the heat or takes the heat from the material in the storage part of the compartment and that heat is removed under circumstances where the conducting surface, namely, the liner of the compartment—the liner in the compartment itself is not frosting or is not supposed to frost.

And it's perfectly clear that the intention of the Admiral device, or the operation of the Admiral device, its expected operation is refrigeration without normal deposits [1435] of frost or abstraction of moisture from the food in the form of frost on the liner. That's clear from the statements in their manuals.

(Testimony of Norman S. Parker.)

In other words, to me the Item 5 reads precisely on the Admiral structure and is satisfied by it.

Q. Do you have any comment with respect to Item 6 of that Chart 114-A?

A. Of course, Mr. Muffly and I do not agree in the interpretation of the statements, "A freezing refrigerant expander having heat conducting surfaces within said freezing compartment." I say that the Admiral structure and, for example, the Admiral freezing compartment as exemplified in Exhibit 117-A does have, as this exhibit says, heat conducting surfaces within the freezing compartment, and these are constructed and the heat conducting surfaces and the expander in the environment in which they are used are constructed and arranged to maintain a heat conducting surface at a temperature well below 32 degrees Fahrenheit while withdrawing heat from said compartment. That is the purpose of this device and that is the way it works.

To me, limitation No. 6 reads precisely on the Admiral refrigerator.

Q. Do you have any comment with respect to Item 8?

A. Well, in Item 8, again, I think the difference between Mr. Muffly and myself is perfectly clear. Mr. Muffly, I don't [1436] think, would deny it.

Mr. Byron: Now, wait a minute. I don't believe that is quite proper.

(Testimony of Norman S. Parker.)

The Court: Well, it's just semantics, that's all. Just change your language.

The Witness: Yes. I would say that I think that we would all agree—put it that way—that the motor compressor unit in the bottom of the Admiral refrigerator working with the condenser which condenses the hot gas delivered from the compressor is the means and the only means for actually taking heat from the two compartments out of the refrigerator and releasing it through the room and in air or whatnot.

In other words, the only way shown in Admiral whereby the heat from the food stored in the two cabinets can be taken out of this refrigerator and can be gotten rid of—the only way to do it is to use the circulating refrigerant which circulates through the single compressor condenser unit at the bottom of the Admiral cabinet. As a matter of fact, it is stated very much along the lines described in one of the Admiral manuals.

Q. All right.

A. So, to me, the limitation 8 reads perfectly precisely on Admiral and you will have to take, of course, the limitation together, “a single liquefying unit associated with said [1437] expander.” Now, what does that single liquefying unit do? It is constructed and arranged to condense refrigerant expanded by heat extracted from both said compartments, and that is precisely what the condenser compressor unit in the bottom of Admiral cabinet does.

(Testimony of Norman S. Parker.)

Of course, Admiral has added something else. They have added an additional secondary system. The obvious function of that system, if I understand it correctly, is to localize the heat from the moist cold compartment so that the primary transfer plate can pick it up and take it down to the compressor condenser unit and get rid of it. And that is not done by the secondary system but by the primary system. All that the secondary system does is to localize, you might say, the heat abstracted from the interior of the moist cold compartment and put it in a place where the primary expander does the work to take it away.

Q. Do you have any comments with respect to Item 9 of 114-A? Sorry——

A. Well, the item is “A volatile refrigerant circulating through said expanders being the sole heat extracting medium.” To me, that is a clear description of the Admiral box since the only volatile refrigerant which abstracts the heat from the two expanders to get rid of it is the refrigerant in the primary system. I can see why, if you were going to choose language, you can say there is in addition another [1438] volatile refrigerant that circulates in the secondary system. That I admit. But I do not feel that that is the volatile refrigerant called for by this limitation. This limitation is perfectly clear. And No. 9 has to be read with No. 8.

It's a perfectly proper description of the use of a single refrigerant passing through a single com-



(Testimony of Norman S. Parker.)

pressor condenser unit which is the means for removing heat from both storage compartments. And that is true of the Admiral structure. So, to me, the limitations 8 and 9 read precisely on the Admiral structure.

Q. I refer you to Plaintiff's Exhibit 4-CC-2, and ask you if there is any statement in that exhibit which substantiates what you have just been saying, particularly referring to page 2 of that exhibit.

If your Honor please, those exhibits are attached to the interrogatories and are difficult to open up in the Court's copy. May I pass my copy to the witness?

The Court: That's all right. Go ahead.

(Whereupon the Crier handed Mr. Cheatham's copy to the witness.) [1439]

A. Exhibit 4-CC-2, Page 2, first column, has a statement which I had better use in the language of the exhibit itself, and I will quote:

"The Admiral Dual-Temp, as its name implies, is a two-temperature, two-compartment refrigerator. It has a separate independently controlled freezing locker for storing frozen foods and a separate independent controlled moist cold compartment for storing foods at ideal conditions of temperature and humidity (above freezing). These two compartments are entirely insulated from each other and in effect constitute two refrigerators in a cabinet and operate by a single motor compressor unit."



(Testimony of Norman S. Parker.)

Q. I refer you to Exhibit 4-CC-6, another Admiral refrigerator service manual, and ask you if you find anything on Page 46 thereof similar to that; however, of the same import?

A. This exhibit is one which I had in mind when I was thinking about Limitation No. 5 and the moist cold and the freedom from icing. At the bottom of Column 1 of Page 46 of this exhibit and running through the top of Column 2 is a passage which clarifies what I mean. I will quote:

“At the normal setting of moist cold or secondary cold control, cut-in and cut-out temperatures about four inches back from the [1440] front edge on the side walls of the moist cold liner level with the half-shelf should be somewhere between 42 degrees Fahrenheit and 34 degrees Fahrenheit. The observable difference between cut-in and cut-out temperatures is not very great due to the impossibility of obtaining ideal thermal contact. At the bottom-shelf level the wall temperatures may normally be a few degrees colder.”

I break my quotation. Here is what to me is a important statement in relation to what I testified about Limitation 5 of Exhibit 114-A:

“However, it is not intended that wall temperatures will ever be carried at the freezing point of 32 degrees. The customer should be instructed to turn the control to warmer if icing occurs.”

Then skipping a few lines and quoting:

“The moist cold compartment air temperature

(Testimony of Norman S. Parker.)

taken with a thermometer placed in a glass of water near the center of the compartment will, at normal, be between 37 degrees and 40 degrees F. after the door has been closed overnight.”

Q. I would like to have Chart 114-B placed on the easel.

(Exhibit referred to produced.)

Q. Will you repeat anything of a similar comment with respect [1441] to the item of difference between 114-A and 114-B?

A. In 114-A opposite Limitation 5—

Q. Mr. Parker, will you explain what difference there is first, and what is your comment as to the difference?

A. Well, the difference basically between 114-A and 114-B is that 114-B is a parsing or application of Claim 4 of the Bronaugh and Potter patent, and the body of the claim is basically the same. There is an additional limitation to what we have been calling or I have been calling the differential insulation about the cold compartment—the freezing compartment and the moist cold compartment. I notice, however, there is a difference in the wording which I am not sure—the basis of which I do not understand in, opposite Paragraph or Limitation 5. In the Exhibit 114-A were the words “No —is the function of the thermostat.” In 114-B although the language of that part of the claim is the same, the words “a valve” have been added under the

(Testimony of Norman S. Parker.)

function of a thermostat. You asked me for a difference, and I am not clear in my mind as to why that was made.

Now, a further addition is, or a change is that Limitation 10 specifies a thermostat which is responsive to the temperature in the cooling compartment and controlling the on and off cycles of said liquefying unit in response to said temperature and the further limitation which is not given a number and which is merely marked "Vague" on the [1442] exhibit,

"A thermal insulation around said cooling compartment having less response to flow of heat thereto from the outside atmosphere than does the thermal insulation of the freezing compartment to insure starting of said liquefying unit by heat flow into said cooling compartment during an off cycle of said liquefying unit before that temperature in said freezing compartment approaches a non-freezing value."

Now, as to the Limitation 10 that the thermostat which is indicated at two points, if I correctly read this structure, the thermostat, this limitation said, is responsive to temperature in the cooling compartment and controlling the on and off cycles of said liquefying unit in response to said temperature.

In other words, the structure, to satisfy that limitation of the claim, must have a thermostat—it need

(Testimony of Norman S. Parker.)

not be in a specific compartment, but it must respond at least to some degree to the temperature of the cooling compartment.

Now, the thermostat which is associated primarily with the freezing compartment is shown by a black line at the upper right-hand part of the Admiral structure, and this location of the heat-responsive member indicated by the black [1443] line is in the Admiral device, if I correctly understand it, located at the bottom of the freezing cabinet where the insulation between the freezing cabinet and the cooling cabinet is at its thinnest, and in one of the service manuals is a statement that the insulation between the freezing cabinet and the cooling cabinet had been reduced to provide a heat path between the two. I had better use the language of the exhibit rather than my own because then we will know precisely what the Admiral manual said. This, again, is 5-CC-2 at Page 1 in the first, about a little above the middle of the second column of Page 1, and I am quoting:

“Also, less insulation is used between the locker of a moist cold compartment, and, consequently, the top of the moist cold compartment is cooled somewhat by the bottom of the locker.”

So there is a heat path between the two. This heat path must inevitably result in the fact that an increase in temperature in the moist cold compartment will have some effect through this thin insulation on the response of the thermostatic member



(Testimony of Norman S. Parker.)

which controls the thermostat which, in turn, controls the compressor condenser unit.

Q. Then you are disagreeing with the statement of "No" appearing opposite Item 10 with respect to the Admiral [1444] refrigerator on Exhibit 114-B?

A. Yes, that is correct, and I would also make an alteration if it were my exhibit, if I were responsible for it. Opposite the words "a thermostat itself" is the word "Yes" and from "Yes" extends a black line to a thermostat which has, again, a thick black line running down to the moist cold compartment. I would draw the line up to the thermostat at the upper right-hand corner rather than the one down in at the left of the Admiral diagram.

Q. Where is that line with respect to the thermostat drawn in Exhibit 114-A?

A. In Exhibit 114-A the line extends to the right-hand thermostat; whereas, in 114-B it extends to the left-hand thermostat of the Admiral diagram.

Q. Mr. Parker, while you are still on your feet I would like to have the exhibit removed, and I direct your attention to the Admiral refrigerator which is on the floor as Exhibit 10-A. Mr. Parker, you testified concerning your opinion as to the difference in insulation between the cooling compartment and the refrigerating compartment in the Admiral Exhibit 10-A, and I ask you if you have had any occasion to strengthen your opinion concerning that differential insulation since that date of your testimony?



(Testimony of Norman S. Parker.)

A. Yes, I read Mr. Bohman's testimony the other day that the insulation was generally uniform of a thickness, if my [1445] memory is correct, of around three inches throughout the cabinet, except that in the bottom of the moist cold compartment where the motor compressor is positioned and at the bottom of the condenser there is a thinning of the insulation of the moist cold compartment. This thinning, of course, is located at or near the zone where the room air is circulating up, through and about this condenser and is taking heat out of the hot gas; in other words, hot gas is being delivered along a hot gas pipe from the motor compressor unit to the condenser. The air flowing around this hot gas is taking the heat out so this is the zone where there is a substantial upward movement of warm air, and when I heard that Mr.—or saw that there was testimony to the effect that it was at this point that the insulation was thinned I became convinced that the result of that thinning would be at least some reduction, and probably a substantial reduction, in the effective insulation of the moist cold compartment. I was also interested in seeing the removal of this pan at which I am pointing which is, was on the back of the refrigerator. I saw this removed, and in the space between the pan and the back of the refrigerator were the tubing to which I am pointing exists, is, there were two thick batts of the insulating material under apparently some compression because when the outside cover

(Testimony of Norman S. Parker.)

was removed they swelled out. The outside cover itself [1446] which I am holding in my hand is somewhere in the neighborhood of two inches thick and it is filled with another insulating batt. Now, these additional insulating means are outside of the general insulation and in addition to the general insulation of the box.

Q. What portion of the box?

A. Of the freezing compartment of the box, so, if I understand the testimony correctly, there is a substantial, uniform thickness of insulation around the freezing compartment and the moist cold compartment, and then this additional insulation is added at the back of the freezing compartment, and it is significant to me that it is added precisely where the warm air flowing upwardly through and past the condenser flows back of the freezing compartment, so what you have here is a movement of warm air up the back of the compartment with some reduction in insulation of the moist cold compartment and a very definite increase in thickness of the insulation of the freezing compartment precisely along the path of movement, along this hot air or heated air. To me that indicates that there must be a very substantial differentiation in the insulating effect or the insulation of the two compartments.

Q. Then, in your opinion, does the Admiral refrigerator come within the terms of Claims 3 and 4 of the patent in suit?

(Testimony of Norman S. Parker.)

A. It is my opinion that it does. [1147]

Q. Mr. Parker, I refer you now to Defendant's Exhibits 114-O, -P and -Q and -R. May I hand the witness my copies? Start with Exhibit 114-O and state briefly what this exhibit purports to be. [1448]

Q. (By Mr. Cheatham): I will ask you to start with Exhibit 114-O and state briefly what this exhibit purports to be.

A. You don't have large reproduction of these, I judge?

Mr. Cheatham: Are there large reproductions?

Mr. Cunningham: May I get them, your Honor?

The Court: Mr. Hart will get them.

Mr. Ramsey: There are no large ones of these.

Q. (By Mr. Cheatham): These are the printed small exhibits. There are no large ones mounted on cardboard.

A. Well, these are four exhibits: 114-O, -P, -Q and -R, about which Mr. Muffly testified.

Taking 114-O first, it is headed "Comparison between Claim 1 accused refrigerators and prior Anderson patent." At the left of the exhibit is the breakdown of the claims just about like what you saw in Exhibits 114-A and -B which I just testified from. At the right-hand of the exhibit are three columns. The first is headed "Admiral"; the second is "Amana"; and the third is "Anderson," in parentheses "Before Potter." Taking the numbered limitations of the claim one by one, Mr. Muffly, I believe, has put a "Yes" or "No" answer in each

(Testimony of Norman S. Parker.)

of those columns. I am going to consider only the Admiral column to the left and the Anderson column to the right because I have not paid much attention to the Amana.

Q. Mr. Parker, do you have any comments with respect to [1149] any of the "Yes" and "No" answers which Mr. Muffly has given on this Exhibit 114-O?

A. Well, there are some of them with which I do not agree, and I would comment. Perhaps it would save time if I mention only the limitations to to which I do not agree.

Limitation 5 I will read for completeness. "Air in said"—this is Claim 1——

"Air in said cooling compartment having a substantially stable temperature of about 40 degrees F. and having a humidity whose relative value is at least 100 per cent at 32 degrees F."

Of course, this is just another way of saying that you have very moist air in the cabinet. In the Admiral column Mr. Muffly has said, "No" and I would say yes.

In the Anderson column Mr. Muffly has said "Yes," and I would say no. Then coming to—I might say that there are statements—a number of statements in the Admiral circulars to the effect that a very moist climate or moist air is maintained in the so-called moist cold compartment. And, of course, the moist cold compartment is marked as a moist cold compartment on the Admiral box, about which I just testified.



(Testimony of Norman S. Parker.)

So when Mr. Muffly says that there is not a moist cold compartment in Admiral and there is in Anderson, I differ with him on both points. [1450]

Then moving to Limitation 7,

“A cooling refrigerant expander having heat conducting surfaces within said cooling compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees Fahrenheit while withdrawing heat from said compartment to maintain said air in said cooling compartment at said substantially stable temperature.”

Mr. Muffly says “No” as to Admiral, and I would say yes. He says “Yes” as to Anderson and I would say no.

In Paragraph 8 or Limitation 8,

A freezing refrigerant expander having heat conducting surfaces within said freezing compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature well below 32 degrees Fahrenheit while withdrawing heat from said compartment.”

In the Admiral column Mr. Muffly says “No,” and I would say yes.

Again, at No. 10.

“The single liquefying unit”—I have already stated my opinion. I had better read it.

“A single liquefying unit associated with said expanders and constructed and arranged [1451] to condense refrigerant expanded by heat extracted



(Testimony of Norman S. Parker.)

from said expanders from both said compartments with volatile refrigerant circulating through said expanders being the sole heat extracting medium."

I have testified already in connection with Exhibit 114-A as to why I feel that that reads precisely on the Admiral box. So where Mr. Muffly said "No," I would say yes. As to Anderson, he says "Yes," and I would say no.

In other words, there are several definite points of difference—difference of opinion between Mr. Muffly and myself as to this 114-O.

Q. Mr. Parker, are you reading off No. 10 on 114-O?

A. Yes. No. 10 is the single liquefying unit limitation which I quoted.

Q. Did I understand you to say that you would say "Yes" as to Admiral?

A. I would say Yes as to Admiral.

Q. And did I understand you to say that you would say "Yes as to Anderson, and I ask you to refer to the Anderson patent so there will be no mistake?

A. Well, Anderson has a single liquefying unit which is associated with two expanders.

Q. Now Mr. Parker, passing to Exhibit 114-P, do you find the same points of disagreement there with Mr. Muffly's "Yeses" [1452] and "Noes"?

A. Yes. The fifth limitation is—wait a minute. In the numbering—the numbering is not, I don't think, identical to the different limitations in the two exhibits. I had best be a little careful.

(Testimony of Norman S. Parker.)

I notice in -P, that Limitation 5 relates to "the cooling refrigerant expander having heat conducting surfaces within said cooling compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees F. and maintained at a humidity whose relative value is at least 100 per cent at 32 degrees F."

As to that, Mr. Muffly said "No" to Admiral. I would say Yes. He says "Yes" to Anderson, and I would say No.

In Limitation No. 6 in 114-P, to the effect:

"That the freezing refrigerant expander has heat conducting surfaces within the freezing compartment and constructed and arranged to maintain its heat conducting surfaces at a temperature well below 32 degrees F. while withdrawing heat from said compartment whereby air in said freezing compartment is cooled thereby to a temperature [1453] well below 32 degrees Fahrenheit,"

Mr. Muffly puts "No" in the Admiral column, whereas I would put Yes. Of course, I would agree with the "Yes" in the Anderson column.

In No. 8 in -P is the limitation numbered as 10 in -O; that is:

"A single liquefying unit associated with said expanders and constructed and arranged to condense refrigerant expanded by heat extracted from both compartments."

(Testimony of Norman S. Parker.)

A single liquefying unit which condenses refrigerant expanded by heat extracted from both compartments, as to that Mr. Muffly says "No" to Admiral. I would say Yes. As to Anderson I would agree with Mr. Muffly on the "Yes." There again, the volatile refrigerant circulating through said expanders being the sole heat extracting medium, I read 9 with 8, of course, and I say that that language to me means that the single liquefying unit which is constructed and arranged to condense refrigerant expanded by heat extracted from both compartments has a volatile refrigerant circulating through the expanders which is the sole heat extracting medium for extracting heat from the two compartments.

In other words, that is what that language means to me. Therefore, I think it says precisely that. Therefore, where Mr. Muffly says "No" in the Admiral column, I say Yes. [1454]

Q. Now, referring to Exhibit 114-Q, would you make the same analysis with respect only to Item 12 at the bottom of the chart, and limit your answer to whether you would say No or Yes?

A. As to Item 12 in 114-Q, a comparison of Claim 3 with the accused refrigerators, I would say in the Admiral column "Yes" where Mr. Muffly has said "No."

Q. Would you make the same statement with respect to Item 10 in Exhibit 114-R?

A. Yes. I would say Yes instead of "No" in the Admiral column.

(Testimony of Norman S. Parker.)

Q. Mr. Parker, have you ever observed any refrigerator of the Potter Refrigerator Corporation in operation?

A. Yes. I have seen two of them in operation.

Q. Have you ever observed the condition of frosting in the cooling compartment in those two operating Potter refrigerators? A. Yes.

Q. Would you state whether or not you have seen any signs of frosting in the cooling compartment coil?

A. In one Potter box which I saw——

My Byron: Excuse me a minute. I would like to have it made clear whether or not he is talking about the structure disclosed in the patent in suit or the actual structure of the Potter refrigerator, and it's improper rebuttal also.

The Court: I think also you are getting pretty close [1455] to the line. As Mr. Parker has been testifying particularly in connection with his comments on the effects and purpose of certain elements in the patent and in the accused structures, I was wondering whether he wasn't making engineering judgments rather than patent judgments. And he has been qualified not as an engineering expert—he has told us time and again that he is not an engineering expert, and he is just testifying as a patent expert. I didn't say anything before, but I think you are getting kind of far afield now asking him his judgment as an engineering expert.

Q. (By Mr. Cheatham): Mr. Parker, in your



(Testimony of Norman S. Parker.)

opinion do you have to be an engineer to see whether a coil frosts or not?      A. No.

Q. Mr. Parker, have you seen the coil in the operating Potter refrigerator about which you talked——

Mr. Byron: We renew the objection.

The Court: Well, that's all right.

Q. (By Mr. Cheatham): ——and the condition of frost with respect thereto?

A. In the two Potter boxes which I had opportunity to see in operation there was slight frosting at the point of entry of the finned—of the tube of the finned coil and there was some frosting on one and I believe two of the fins, which would be at the left hand of the Potter box, the box in exhibit. There was a slight frost—a little frost, yes. [1456]

Q. What does the Potter patent say with respect to the amount of frosting?

Mr. Byron: Now, wait. I would like to have that question again. I think I am going to object.

The Court: "What does the Potter patent say with reference to frosting?"

Mr. Byron: Well, the patent speaks for itself.

The Court: Go ahead. Go ahead, Mr. Parker.

The Witness: There is an illusion to slight frosting in the Potter patent. I haven't got the patent before me and I would hesitate to improvise. Could I have a copy of it?

(Whereupon the Crier handed the copy of the patent to the witness.)



(Testimony of Norman S. Parker.)

The Witness: In Column 6 of the Bronaugh and Potter patent, starting in Line 3, there is this sentence:

“There may, of course, occur a slight amount of frosting where the cooling coil 25 enters the compartment 14.”

Mr. Cheatham: The witness is yours.

### Cross-Examination

By Mr. Byron:

Q. Mr. Parker, let us refer for the moment to the patent in suit, and in Figure 1 in the cooling compartment you will observe a milk bottle 30. What is that for? [1457]

A. I didn't hear the last word.

Q. What is that for?

A. It's to collect condensed moisture from the cooling coil 25.

Q. Speak louder, please.

A. It's to collect condensed moisture from the cooling coil 25. It's mentioned at Column 3 of the patent about Line 20, and following it says—I had better go back a little——

“The compartment 14 may have any number of divisions and shelves 27 and contains a drip collecting shield 28 by means of which condensed moisture from the cooling coil 25 is collected and drained through an outlet 29 either into a container 30 as shown or into waste pipe.”

(Testimony of Norman S. Parker.)

Q. So that that moisture might be the result of frost that had been melted, may it not?

A. To the extent that there is frost.

Q. Yes. And then, there is considerable moisture collected on the fins, is that correct, in the Potter arrangement?

A. I would think so, yes.

Q. And so that there is a great deal, then, of moisture in the form of water which drains down from the coils in Potter and through the drain portion groove 28 and into the bottle 30. That's correct, isn't it?

A. I don't know that there would be a great deal. There [1458] is obviously——

Q. Well, there is a quart bottle illustrated. That's quite a bit, isn't it?

A. Well, if it were filled. The question is whether it's filled or not. I don't know whether there would be a great deal or not. There certainly——

Q. Well, now, how——

A. It's for moisture. It's expected to be some deposit of moisture.

Q. That's right. And where does that moisture come from? It comes from the air and food in the cooling compartment, does it not?

A. Yes.

Q. So that to that extent there would be dehydration, would there not—dehydration of air and food in the cooling compartment?

A. I think there must be some in very wet foods. There undoubtedly will be some loss of moisture. Also in hot weather——

(Testimony of Norman S. Parker.)

Q. Well, now wait. Just answer my question Yes or No.

A. I can't answer it Yes or No, because it's the kind of a question to which an answer Yes or No is deceptive.

Mr. Cuninghame: May he answer, your Honor?

The Witness: If you have the misfortune to live in the type of humid climate I live in in the summer in Chicago, [1459] the air is simply loaded with moisture and every time you open your refrigerator you circulate outside wet air into the interior of the refrigerator. I know that from sad experience.

Q. (By Mr. Byron): Well, do you mean by that that there is no dehydration in the cooling compartment whatsoever?

A. No, I don't mean that at all. I mean that there must be some loss of moisture in any refrigerator and there certainly is in Potter. What the amount of it is, I couldn't tell you. I don't know.

Q. That's right. It may be a great deal or it may not be so much, you don't know?

A. That I wouldn't know.

Q. You just don't know. All right.

I would like to have—I hate to cause all this disturbance and noise of getting those exhibits here.

(Whereupon the exhibits were moved by the Crier to the better view of the jury.)

Q. (By Mr. Byron): Mr. Parker, your attention is directed to three exhibits. One is the chart,

(Testimony of Norman S. Parker.)

114-A. Another is the portion of the physical exhibit 117, and 117-A, the last two being portions of the accused Admiral refrigerator. Now, looking at Plaintiff's Exhibit 117-A, I have placed this pointer in what I regard as the cooling compartment. Do you agree?

A. No. I regard as the cooling compartment that part of [1460] the Admiral structure, that space in the Admiral structure which is surrounded by the insulation which controls the temperature in the cooling compartment. This, to me, is part of the cooling compartment (indicating). But this is the food storage space in the cooling compartment which you pointed to.

Q. Do you cool food by placing it in the insulation?

A. You cool food by placing it within the insulation, in this instance within the liner.

Q. Wait a minute. Now, this is just becoming argumentative. You place the food in the cooling compartment, do you not?

A. Yes.

Q. For what purpose?

A. To cool it.

Q. Right. So that is the cooling compartment?

A. It's in the cooling compartment.

Q. This metal——

The Court: I think Mr. Byron, there is a sharp difference of opinion between you and Mr. Parker.

Mr. Byron: All right.

The Court: And I don't think any useful purpose is going to be served to continue that line of interrogation.

(Testimony of Norman S. Parker.)

Mr. Byron: I think you are right, your Honor.

Q Now, referring to this Defendants' Exhibit 114-A where Claim 2 is parsed, and referring particularly to Element 5 [1461] thereof, I wish to read a portion of that:

“A cooling refrigerant expander having heat conducting surfaces within said cooling compartment.”

Now, by “expander,” we are referring to a coil 25 in the Potter patent, are we not?

A. That's what Potter showed.

Q. That's right. And the cooling coil in the accused structure is the coil—the coil surrounding the side and back of the cooling compartment, is that correct?

A. That's part of the system.

Q. Now, the cooling coils in the accused structure are not within the cooling compartment in so far as the space in which the food is placed, is that correct?

A. That's correct. [1462]

Q. Now, then, you have also stated, I believe, that the cooling expander or coil or duct, part of it is found on the, attached to the plate of the primary transfer plate of the primary system; is that correct?

A. That is true.

Q. You start, then, with the expansion pipe or tube attached to the primary plate. A cold zero refrigerant is passing there through; is it not?

A. That is right.

Q. Is that the surface of the cooling coil which is within the cooling compartment?

A. I am thinking primarily—after all, the surface which the claim calls for it, it is a surface



(Testimony of Norman S. Parker.)

which takes heat from the food, the initial surfaces which take the heat from the food is the liner.

Q. Let us refer to the patent in suit temporarily. Now, the coil 25 in the patent in suit is within the cooling compartment; is it not? A. It is.

Q. And its cooling surfaces are within the cooling compartment, that is correct? A. Yes.

Q. All right, now; that is not true in the accused structure. I would like to have you follow or point out the connection from the freezing coil forming a part of the cooling system [1463] which is attached to the primary transfer plate and explain how that can be construed as within the cooling compartment.

A. Well, the limitation we are discussing of the claim does not call for that. It says, it calls for heat-conducting surfaces.

Q. That is right.

A. Of the cooling compartment.

Q. I am speaking——

A. And here are the heat-conducting surfaces within the cooling compartment.

Q. Now, where is your connection between the freezing coil on the primary plate with its heat-conducting surfaces there connected to the heat-conducting surfaces within the cooling compartment?

A. Well, the Admiral manuals are very careful to point out it is important to maintain a good thermal contact between the transfer plate of the

(Testimony of Norman S. Parker.)

so-called secondary system and the transfer plate of the so-called primary system, and the heat within the moist cold compartment is removed by the coil on the primary transfer plate drawing heat conducted to it from and by the secondary transfer plate.

Q. I would like to have you take that step by step through each element.

The Court: Why doesn't he do that right after a short [1464] recess? Ten minutes.

(Thereupon, the morning recess was taken.)

Mr. Byron: I think I might shorten this cross-examination a great deal, your Honor, because I see that the patent expert, Mr. Parker, for plaintiff, and the engineering expert, refrigeration and engineering expert for defendants, are in hopeless conflict on certain points which I think are clear probably to the Court and to the jury, but just to emphasize what some of those conflicts are, just to touch them and drop them, I will refer to Defendants' Exhibit 114-A. I will refer first to that entire element 5 which I will now read:

“A cooling refrigerant expander having heat-conducting surfaces within the cooling compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32 degrees F. while withdrawing heat from said compartment whereby air in said cooling compartment is cooled thereby to a temperature above 32 degrees

(Testimony of Norman S. Parker.)

F. and is maintained at a humidity whose relative value is at least 100 per cent at 32 F.”

Now, there is one of the points of conflict in which you say that is perfectly clear and defendants’ expert believes is indefinite and claims generally it is not [1465] entirely understandable. Now, that is the fact, is it?

A. That is a fair statement.

Q. Then the next element, 6:

“A freezing refrigerant expander having heat-conducting surfaces within said freezing compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature well below 32 degrees F. while withdrawing heat from said compartment whereby air in said freezing compartment is cooled thereby to a temperature well below 32 degrees F.”

Now, defendant’s expert says that is vague and this “constructed and arranged” is a function of thermostat and not anything to do with the construction of the expander itself, and you and the engineering expert for defendants are in conflict on that?      A. Correct.

Q. Referring to elements 8, 9 and 10, which I will read:

“A single liquefying unit associated with said expanders and constructed and arranged to contain refrigerant expanded by heat extracted from both said compartments, the volatile refrigerant circulating through said expanders being the sole heat-extracting medium.” [1466]

(Testimony of Norman S. Parker.)

Now, you are in conflict on that, you and the defendants' expert?           A. Yes.

Q. In that the expert for the defendants says that there is more than the one liquefying unit, and you say there is but one, and he says that there are two volatile refrigerants and you say there is one, and you feel that the two are the same as the one, and you are in conflict on that point?

A. No, that is not the way I would say it.

Q. Well——

A. In fact, I would say your question does not represent my position.

Q. Well, you may state it. At least, you are in conflict on those elements?

A. We are definitely in conflict on the interpretation of that.

The Court: You may state your position, Mr. Parker.

The Witness: My position is, and this is as to the 8, that you read the language together and not split up into bits the term "a single liquefying unit associated with said expanders." In other words, there has got to be not merely a single liquefying unit but a unit which is associated with both said expanders, this liquefying unit being constructed and arranged to contain refrigerant expanded by [1467] heat extracted from both compartments, the volatile refrigerant circulating through said expanders being the sole heat-extracting medium.

To me, the fact that you have—in order to carry



(Testimony of Norman S. Parker.)

heat through the secondary system from the moist cold compartment to the part of the primary coil which abstracts heat from the moist cold compartment makes no difference, that is an addition, but you still have that single liquefying unit which is associated with the two expanders and which is constructed and arranged to contain refrigerant expanded by heat extracted from both compartments, and that is the only structure in the Admiral box which has those characteristics, and, to me, it is a single liquefying unit associated with the two expanders.

The other secondary unit is merely a heat-transmitting means for picking up heat and equalizing the flow of heat, getting the heat to flow through the liner surface to a point right back of the liner surface of the moist cold compartment where it is picked up by the volatile refrigerant which is the sole refrigerant which takes the heat from the two compartments. To me, that language is perfectly clear.

Q. In the accused structure, Mr. Parker, there are two systems or circuits, a primary circuit carrying one refrigerant—this is in the accused—and in the secondary [1468] another refrigerant; that is correct, is it not?      A. That is correct.

Q. And those are two different refrigerants; are they not?

A. Well, I don't know what the refrigerants are. They are different bodies of refrigerants, separate bodies.



(Testimony of Norman S. Parker.)

Q. Do you know if there is any advantage in having one refrigerant circulating in the primary system and another refrigerant circulating in the secondary system? A. I wouldn't know.

Q. Well, I might tell you. It may refresh your memory.

Mr. Cheatham: Objection, your Honor.

The Court: Mr. Parker is not an expert. He just knows how to read a patent, and that is all he claims to do. I think sometimes he has gotten a little over it.

Mr. Byron: That is what I thought.

The Court: But you cannot ask him that question.

Mr. Byron: I thought perhaps I would be entitled to the same privilege on that. Well, be that as it may, the accused refrigerator is a cold-wall type, is it not?

A. Yes.

Q. And the Potter is a finned-coil type; correct? A. Correct.

Q. They are different structurally, are they not?

A. Yes, there are structural differences. [1469]

Q. What is that?

A. There are structural differences, yes.

Q. The potter patent has a freezing coil and the cooling coil in series, and the same refrigerant passes through both of them; correct?

A. That is correct.

Q. That is not so in the accused refrigerators, is it?

(Testimony of Norman S. Parker.)

A. No, I do not agree with you there. The only refrigerant which takes heat from the two compartments flows through the duct which is, part of which removes heat from both compartments, and those ducts are in series.

Q. I am afraid you did not answer my question, so I will have to ask it again, Mr. Parker. I think you argued another point.

A. I am sorry; I misunderstood your question.

Q. Let me put it to you again. The Potter patent has a freezing coil and a cooling coil in series, and the same refrigerant passes through both of those coils?      A. That is correct.

Q. I say, this is not so in the accused refrigerators. In the accused refrigerators you have a primary freezing coil and a secondary freezing coil, and they are not in series, are they?

A. Oh, you mean the arrangement of the——

Q. The coils are not in series? [1470]

A. Well, the same—they are in series——

Q. Point out where they are in series.

The Court: Wait a minute; let the witness answer.

The Witness: Well, if you take—looking at 114-A—this does not show it so clearly.

Q. (By Mr. Byron): Let me put a simpler question to you, and then I think you can take care of it. Let us say that we have two sections of hose. We connect up the first section to the faucet for sprinkling the lawn, and then we attach the second

(Testimony of Norman S. Parker.)

section of hose to the first section. Those sections are in series, are they not?      A. That is right.

Q. And the same water goes right through both of them?      A. Right.

Q. Now, then, in a secondary system you have two different sections. You have one section through which—we will go back to the refrigerant—it flows, and then you have a separate circuit entirely through which a refrigerant flows; now that is correct, isn't it?

A. Yes, there is a separate refrigerant in this second circuit.

Q. That is right. That is all the question was. We brought out the fact that each coil in the accused, in the accused structure, has its own separate refrigerant.

A. Well, that secondary system has its separate refrigerant. [1471]

Q. That is all I asked.      A. Yes.

Mr. Cuninghame: Now, your Honor, I object. I think he has more answer than that.

The Court: You can bring that out on redirect. He asked the question. If you want to add anything to it, Mr. Parker, you are permitted to do it, of course.

The Witness: The way the question was asked, I think that is the complete answer. He asked me a simple question. I do not want to get argumentative. I would rather answer the question the way he gives it to me.

Q. (By Mr. Byron): Your attention is directed

(Testimony of Norman S. Parker.)

to Defendants' Exhibit 114-G in which Claim 2 is parsed, and an application is made in part to Gibson Patent 21941 and to the Admiral structure, the accused structure. Now, the Gibson patent discloses a secondary circuit, does it not?      A. It does.

Q. It is substantially the same in that regard as the accused structure; correct?

A. There are differences in detail——

Q. I mean, insofar as the secondary circuit is concerned they are identical; are they not?

A. Yes; that is right.

Q. Then you agree with the statement made in behalf of Potter in the file wrapper of his patent, 2,219,789, Page 27: [1472] "Obviously,"——

The Court: I think he ought to be shown the document.

Mr. Cuningham: It is a very limited-purpose document, your Honor. You recall the admission.

Mr. Byron: It is Exhibit 118.

Mr. Cuningham: That is the file wrapper, Potter.

Q. (By Mr. Byron): Just one question in connection with it, your Honor. Turn to Page 27, please, about in the middle of the page, and you will see a sentence starting, "Obviously."

A. Yes.

The Court: Show it to him, Mr. Byron.

Q. (By Mr. Byron): Well, do you see it?

The Witness: I see it.

Q. I will read a sentence to you. Check me and see if I am reading it accurately:

(Testimony of Norman S. Parker.)

“Obviously, Gibson does not have a secondary boiler in the food compartment.”

Do you see that?           A. Yes.

Q. Do you agree with that statement?

Mr. Cheatham: Your Honor, I think the witness should be permitted if he is going to answer that question, which I think is immaterial—be given an opportunity to read the whole document and study it and take that sentence in its context to see whether he can agree or disagree. [1473]

The Court: I think he can ask the question without regard to what Potter says, and I do not think it really makes very much difference what Potter says.

Mr. Cuninghame: If your Honor please, that is the whole point, and it is certainly immaterial as to what this witness says about what Potter says.

The Court: Let me ask a question. Mr. Parker, supposing that Potter thought that the compartment was the portion where you put the food in and not the portion on the outside. Would that make any difference?

The Witness: Not to me, no, your Honor. I mean, what Potter or Potter’s attorney said in some prosecution of some application for another patent, I do not think that I——

The Court: Suppose he said it in this patent.

The Witness: Well, if he said it in the patent itself clearly and put a limitation on himself, why, then, I might—I do not know; that is theoretical. I would have to see if, of course, to see what he said



(Testimony of Norman S. Parker.)

and what the context was and what is in the patent.

The Court: Mr. Parker, does it make any difference what Mr. Potter meant about the cabinet?

The Witness: I would not say that it made too much difference because, after all, Mr. Potter was not a patent lawyer. He might entirely misunderstand the technicalities [1474] of the patent law. I do not know that his impression of what is an equivalent or what is what would really make much difference.

The Court: In other words, if he thought that the inside of the cabinet where you put the food in was the place to have the coils, if it was described the way it was described in the patent, is it your contention that what Potter thought would be immaterial? It is what the language says.

A. I think what the language of the claim says construed in relation to the specification and drawings is what controls. Potter might even change his mind over a term of years, your Honor.

The Court: If you and some of the other people disagree as to the meaning of what the interior of the box means, what does that indicate? Here specifically Mr. Muffly says one thing; you say another. What does that indicate to you?

The Witness: Well, it indicates to me that in any patent, any patent language, there may be room for differences of opinion; otherwise, we would not have patent suits. I do not agree with Mr. Muffly, and Mr. Muffly does not agree with me. I have not heard Mr. Muffly say anything which leads me to think that I am wrong. My opinion as to how these

(Testimony of Norman S. Parker.)

claims read and as to how the language should be interpreted has not been changed by anything I have heard Mr. Muffly say. [1475]

The Court: Even if Mr. Potter agrees with Mr. Muffly, that would not make any difference to you?

The Witness: Even if Mr. Potter agrees with Mr. Muffly, that would not make any difference to me unless it was in this patent in suit in some way in which it would be actually binding on the holder of the patent in the context of the patent.

In other words, if in this reissue claim it said that all parts of the expander system, including the part where the refrigerant is evaporated has to be in the food storage compartment, that is in the claim, why, then, that is all there is to it, but the claim does not say that.

The Court: The claim does not state this term nor many terms; is that right?

The Witness: That is right.

The Court: Then you have to make certain assumptions?

The Witness: You have to make some assumptions. As I say, there is always some possibility as to a difference of opinion as to the language of a patent claim. If there was not, there would be any patent suits.

Mr. Byron: The cross-examination is closed.

### Redirect Examination

By Mr. Cheatham:

Q. Mr. Parker, can you give us a rough estimate of how long [1476] it would take you to mark on

(Testimony of Norman S. Parker.)

defendants' charts, Exhibits 114-A to -R, by circles, the words "Yes" and the words "No" on which you disagree with Mr. Muffly?

A. Oh, I suppose I can——

Mr. Byron: I think that is improper to mar our exhibits.

The Court: The exhibits are the exhibits of the Court, and if he wants to mark anything up that is perfectly all right so long as they know it is not yours.

Mr. Cheatham: May he do it during the recess, please?

The Court: That is all right.

(Discussion off the record.)

Mr. Cheatham: No further redirect.

The Court: That is all, Mr. Parker.

(Witness excused.)

The Court: Is that the plaintiff's case?

Mr. Cuningham: Yes, your Honor. I have a certain worry about some exhibits, but I understand we can check those later.

The Court: It has been understood and we have agreed earlier, that even though you close your case you have the privilege of introducing exhibits which have been offered but not admitted. You cannot introduce any new exhibits.

Mr. Cuningham: No; no, I understand that.

The Court: You may check the record to see if

(Testimony of Norman S. Parker.)

an [1477] exhibit has been admitted or if it has not been admitted and it has been offered. You can do it at a later time.

Mr. Cuninghame: I must say I think our record is pretty good at that, but I would like to check. That is all, your Honor.

The Court: Mr. Byron, do you have anything further?

Mr. Byron: Nothing further, your Honor.

The Court: I think what we ought to do now is take a recess until about 1:00 o'clock. That will give everyone an opportunity to collect their exhibits and do other things that are necessary. We are going to start argument this afternoon. I think we will be finished. We are going to try to finish the argument. You are excused until 1:00 o'clock.

(Thereupon, the jury retired for the noon recess.)

(The jury having retired, the following proceedings were had:)

The Court: Mr. Ramsey?

Mr. Ramsey: We renew the motion we made at the end of plaintiff's case and as an additional ground, on the ground of vagueness and indefiniteness, that that has not been spelled out more particularly as brought forward in the motion.

The Court: Did you read the memorandum submitted by Mr. Cheatham this morning on the question of amendments to [1478] the specifications?

Mr. Kolisch: I have just received it, your Honor. I have not had an opportunity of reading it.



The Court: You reassert all the grounds set forth in your written motion together with an additional specification of vagueness. I have the motion made previously, but I think that in the interests of orderly procedure this should either be read into the record or a new one filed, and will you do that by 1:00 o'clock this afternoon?

Mr. Ramsey: We will do it, your Honor. Would it be satisfactory if it is read into the record? It might be a little difficult to get it all rewritten by that time.

The Court: Yes.

Mr. Cuninghame, this is the time I told you to make your motion.

Mr. Cuninghame: If your Honor please, I have given, I must confess, only one copy, I had my own copy, and I gave Mr. Kolisch only one copy because that is all I had, and in that, Mr. Kolisch, is a document labeled "Plaintiff's Requests for Instructions to the Jury, 90, 91 and 92." Those are changed to a motion. I so move, your Honor.

The Court: You are moving now that certain issues be withdrawn from the jury. Will you read them into the record?

Mr. Cuninghame: Thank you, your Honor.

I move that the following issues be withdrawn [1479] from the jury:

The issue of validity of the reissue patent, No. 23058, upon the grounds that the defendants have failed to sustain their burden as to this issue by the testimony of Mr. Muffly and the other evidence. [1480]



I further move for withdrawal from the issues to be submitted to the jury any issue with respect to the legal right of the plaintiff to maintain this action, upon the ground that the defendants have failed to submit sufficient or in fact any evidence that would negate such legal right.

I further and finally move to withdraw from the issues to be submitted to the jury any issue of infringement of claims 1, 2, 3, and 4 of Reissue Patent 23,058 upon the grounds that the defendants have not met the plaintiff's proof as to infringement and, in fact, have admitted in their booklets, service manuals, and by the testimony and in the patent of Mr. Morton that the secondary transfer plate assembly amounts to no more in substance than a mere fin attached to the primary transfer plate coil, which coil is in series with the primary freezer coil in both defendant structures.

The Court: All right. Plaintiff's motion is denied in toto. Defendants' motion will be taken under advisement. This is in accordance with our original understanding and the parties will argue the case, and under the Federal rules I have—I will have time to consider the motion at a subsequent time.

Now, we are coming back at 1:00 o'clock. I think that if Mr. Kolisch and Mr. Cheatham can come to my chambers at 12:30 we will take a quick run-down on the instructions [1481] and there may be

some questions that I want to ask.

All right. Recess until 1:30.

(Thereupon, at 11:50 o'clock a.m. a recess was taken until 1:00 o'clock p.m.)

Afternoon Session

(Court reconvened, pursuant to recess, at 1:00 o'clock p.m., at which time arguments were rendered by counsel for the respective parties, reported but not transcribed, at the request of the respective parties.) [1482]

United States District Court, District of Oregon  
Civil No. 6016

MOIST COLD REFRIGERATOR CO., INC., an  
Oregon Corporation,

Plaintiff,

vs.

LOU JOHNSON CO., INC., an Oregon Corpora-  
tion, and MEIER & FRANK COMPANY,  
INC., an Oregon Corporation,

Defendants.

and

ADMIRAL CORPORATION, a Delaware Corpo-  
ration, and AMANA REFRIGERATION,  
INC., an Iowa Corporation,

Defendants-Interveners.

November 30, 1955

Before: Honorable Gus J. Solomon, District Judge.

## OPENING ARGUMENT OF MR. CUNINGHAM

Mr. Cuningham: If your Honor please, Ladies and Gentlemen of the jury: I think I shall read this opening argument for the plaintiff because I think it is the only safe way in a case like this to be sure what you say and to be clear. I am afraid it will be not as interesting as if I were to extemporize, but I think it is better. So I shall stick to the book. I feel that way because I think it will be less interesting.

First off, I do wish to thank you on behalf of our client, Moist Cold, for your very patient attention to our efforts to piece together the important events and facts of the last twenty-seven years of the history of this patent in suit. I want also to thank each of you personally for the very courteous attention that you have given at the trial and to learning the tribulations of the parties in this case and the way in which you have been here every day and in which you have succeeded in devoting your constant attention to all of the witnesses here and the way you have surmounted the difficulties occasioned by the unusual snow and rain. I want to apologize for any act of mine that has caused the Court to reprimand me.

We patent lawyers are not very apt at jury trials and at the same time I want to assure you that every effort on my part was prompted by my belief in the justness of my [2\*] client's cause and my desire to have you hear all of the evidence which seemed to me, perhaps erroneously, but sincerely

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\*Page numbering appearing at top of page of original Reporter's Transcript of Record.

relevant in this case. I am beginning to realize it is true that the patent lawyers try a case differently from other lawyers, and I have tried my best to get the facts before you as well as I have been able to do.

This case in which it is now your duty and privilege to determine is for the infringement of Re-issue Patent 23058 granted December 14th, 1948, to the then owners of the original patent, 2,056,165, which had previously issued October 6th, 1936, as a result of an application filed on February 16, 1931. The original patent application was filed on behalf of Bronaugh and Potter, Mr. Bronaugh being the first witness you heard on behalf of the plaintiff, and Mr. Potter being the person whose deposition you heard and who now lives in New York City.

Mr. Bronaugh assigned his interest in the patent to Mr. Potter very early in the history of the case, and you heard him testify to his signature on the assignment. Various assignments of the patent have been made by successors in ownership until the last assignment which assigns the entire right in the patent to the plaintiff, Moist Cold Corporation.

The Plaintiff's Exhibit 17 is the certified copy of the assignments. I will just drop it here. [3]

The Court: All of the exhibits will be delivered to the jury at the time of their deliberation.

Mr. Cuninghame: I said twenty-seven years of history, and that takes us back to about November of 1928. Actually, perhaps, the history should go back many years before that to the early days of Mr. Potter himself; however, we are concerned with



the present invention and will pick 1928 as a good point to begin. We hope that the evidence presented to you has caused you to cast your minds back to the period when this invention was created here in Portland; that is the era as of which you should appraise this invention, not as of now. It is difficult but really necessary for you to try to do that.

Beginning late in the year 1928 Mr. Bronaugh took charge of the Potter Refrigerator Company, first as Manager of the Potter Refrigerator Sales and then as President of the Potter Refrigerator Company when it was formed in March of 1929. It was late in the fall of 1928 when Mr. Bronaugh took charge of the manufacturing activities of the Potter Refrigerator Company which had been manufacturing refrigerating systems for many years. In casting your minds back we feel that you will have many reminiscing moments. This was near the end of the Roaring '20's just before the stock market crashed. This was the era of the Black Bottom, the Charleston, hobble skirts and Rudy Vallee. [4] This was the beginning of transcontinental aviation, and a man named Charles Lindbergh had just flown the Atlantic in a single-engined plane. It still took five days to get from here to Honolulu, and the iceman was making daily deliveries at most back doors throughout the United States of America.

A number of companies were then putting out dry cold electric refrigerators which had a small freezing coil to hold ice cube trays, and the Potter Company was competing with them in the Portland



area by installing its refrigeration systems in the old iceboxes; sort of funny to think of now when we consider our gleaming porcelain jobs such as the Admiral refrigerator, Exhibit 10-A, and the Amana refrigerator, Exhibit 10-B. However, it was serious then since no one knew exactly which way the business was going and ice was still cheap.

As a small company with a very limited local market, the Potter Company had to have consumer satisfaction, so Mr. Bade, whom—I am sure you will recall his deposition—the service man, came into the picture and his job, in addition to assembly and certain experimental work, was to make certain that the customers remained satisfied. There were other people in the Potter Company in contact with the customers and through them a picture of dismaying dissatisfaction slowly appeared. The ladies of Portland were not happy [5] with their modern convenience, the electric refrigerator, and some of them wanted the iceman back. Why? Well, foods dried out, salads wilted, butter absorbed odors from other foods. At first Potter and Bronaugh thought that this was the natural resistance to change which almost everyone encounters in promoting a new product, and they thought that a program of education would show the ladies of Portland that they were wrong and that Mr. Potter and Mr. Bronaugh were right. However, by the spring of 1929 they were convinced that they, not the ladies of Portland, had been wrong. They faced this fact, and what they saw was an alarming prospect. If there was no satisfaction, there would be no more

sales and the company would surely fail. Something had to be done, and they set to work, holding numerous conferences and scribbling on pieces of paper, which Mr. Bronaugh told you that he used to throw in the round file 13 on the floor as soon as they had served their purpose, and which Mr. Herrmann and Mr. Potter have also mentioned.

Both Mr. Potter and Mr. Bronaugh have stated that it was through their joint efforts that an idea was slowly and laboriously born. Thus the first phase of this invention had arrived, the recognition of a need in the art which had not been apparent to those skilled in the art.

Mr. Potter had had several years of experience [6] with his compressor and with his dry cold refrigeration system. Mr. Bronaugh was a natural-born mechanic, as Mr. Potter testified. Mr. Bronaugh was a failure as a salesman but a success as a plant manager. Mr. Bronaugh had always played with machinery. They put their heads together and shifted ideas back and forth until it became apparent that what they needed was a two-compartment box, one for food to be kept moist and cold, as foods were kept in the old icebox which the ladies of Portland were accustomed to using, and another for making ice cubes and frozen desserts and keeping frozen foods such as the Birds Eye frozen vegetables, where were just beginning to appear on the market in any quantity. Thus, sometime in the spring of 1929 the second step in the creation of an invention came about.

Invention is a two-step process: First the mental concept, and then the physical reduction to practice of the idea. That constitutes invention in our jargon.

Now, of course, merely seeing what needs to be done doesn't mean that it can be done. It is just like Jules Verne when he wrote in the 1880's about a trip in a rocket to the moon. No one yet has been able to do it. So, as in the launching of any new invention, the inventors started experimenting, using for their first experimental models old iceboxes, Fir-Tex insulation board, old radiators [7] and evaporators, and the Potter refrigeration pump which was readily available to them. The first box which they made had the freezing compartment beside the moist cold compartment, but essentially all of the elements of the combination were there. No sooner was one box made than they tried another and another, as Mr. Bronaugh and Mr. Potter have verified. Also verifying that were Mr. Herrmann and Mr. Bartlett and Mr. Bade, all disinterested witnesses to these important facts, the facts of dates.

Tests were run constantly, and finally they achieved their desired result of a food freezing compartment which could be maintained at a temperature of 10 degrees Fahrenheit and a moist cold temperature of 40 degrees Fahrenheit in the food cooling compartment and a temperature of minus 10 degrees Fahrenheit in the ice cube freezer, all this, of course, in one box under the control of a

single thermostat and operated by a single refrigerant liquefying unit.

This has been amply corroborated by the testimony of Mr. Bade, the service man, who you will recall came to work in June of 1929 and states that the experimental boxes were being tested in October of 1929 by Mr. Bartlett, the salesman who came to work for Potter in November of 1929 and saw the experimental boxes being tested during his [8] first month or two of work; and by Mr. Herrmann of Eugene who then had charge of the shop who corroborated this, also. Mr. Herrmann came to work for Mr. Potter in the early summer of 1929, and the boxes were built directly under his supervision. By the spring of 1930 the inventors had successfully completed, tested and proven their invention to their own satisfaction. Others had witnessed the tests. In the spring of 1930 the invention was completed by an actual reduction to practice. That is the date of the invention in suit.

The invention having been proven, Messrs. Bronaugh and Potter proceeded to build a commercial model, just as any prudent manufacturer builds commercial models today. Mockups—at first crude boxes—were built, one of which was called the Barry box. It has been so-called throughout this case because it was Mr. Barry who bought it. [9]

A different style of box was built by them in the early summer or fall of 1930. This was a wooden box built by the Matthews Company here in Portland and incorporating a brine tank and other metal



parts fabricated by the Anderson Company here in Portland. Ladies and Gentlemen, we have that box here. It is not this one; it is the one covered up by these exhibits, and you can just glance at that and compare it mentally with the large drawings that you have seen several of. Here is one on Exhibit 9-A-1. You will see the exact correspondence. That, we are fortunate and proud to say, was the model for the patent drawing.

Of course, Mr. Bronaugh and Mr. Herrmann have both identified this. Mr. Bade said he worked on it. Mr. Bronaugh stated that he knew it because he built it. Then a metal-covered box of the same general type was built, and that is the one I first went to, after that five more, then six more. Mr. McChesney from Seattle bought this particular box, the one I have just opened and referred to, 11-A. He bought the box in June of 1931 and used it in his home until 1950. When he bought it, he replaced a two-year-old conventional dry-cold refrigerator which he testified was in good condition. Plaintiff's Exhibit 22, which is a black photostatic copy of a letter of September 12, 1931, a letter from Mr. McChesney to the builders of this box, extols the virtues of the box and states his complete satisfaction with its operation and the [10] solution of the problem. This is a 24-year-old letter. This box about which Mr. McChesney has testified is Plaintiff's Exhibit 11-A, and, as you know, is here on the floor alongside these modern shiny boxes. The actual drawing, as I said, of the patent was made from this particular box as stated by Mr. Potter. Mr.



Parker, plaintiff's expert, said that he would be surprised if the drawings of the patent in suit were not made from drawings of that box, and the defendants have brought forward no evidence to disprove his identification. These dates are always important, and that is the purpose of dates.

Mr. Potter—and so I will not appear to be mysterious about it, the reason we are anxious for these dates is the Gibson patent, which, as the charts and all the records show, has the file date of September 30, 1930. We antedate or come ahead of the Gibson patent, and we won't have to bother with it.

Mr. Potter then filed his patent application in February, 1931, and the patent was granted as previously stated. Now there is a popular misconception that the filing date of a patent application is the important date, but we trust you realize, because of our careful attention to the evidence supporting the history of the invention prior to the filing date, that that is not always so, and in this situation with which we are concerned now here in Court, [11] the important date is the date of actual reduction to practice of the invention in a proven model which is demonstrated to achieve the results sought by the inventors. That is the important date in this case, and we think that we have proved beyond a shadow of doubt that the invention date was no later than the spring of the year 1930. There may be differences in the exact date which each of the five mentioned witnesses remembers, but all agree that the first complete and successfully

proven refrigerator embodying the system of the patent was created, operated and tested sometime between the fall of 1929 and the spring or early summer of 1930. Gibson has September 30, 1930.

Mr. Potter then went to Buffalo in the spring of 1931, shortly after filing his patent application through the attorney here in Portland, because by that time he had realized that in order to launch the new product on the market he had to go to the source of cabinets, just as most of the refrigerator manufacturers have at one time or another in the past and still do today. So he moved to Buffalo where the Jewett Company was making and engineering the very finest iceboxes then known in the United States, and he made arrangements for them to supply him with cabinets into which he could place his pump and his refrigerating system. You will recall the deposition of Mr. Bommer read earlier in the case. You may recall, and I shall recall it to you, that he left his [12] position as Chief Engineer of the Jewett Company, this fine engineering and refrigeration engineering concern, to come as chief engineer of Potter because of his conviction in the potential of this invention, and he is today one of the best qualified men in refrigeration engineering in this country, as I think the deposition clearly states.

It was not until sometime in 1932 that the Tricold refrigerator was launched. It very shortly later thereafter became the Potter Refrigerator Company. This launching was accompanied by the 20-page advertisement in the Electrical Refrigeration

News of February 24, 1932, as exemplified by Plaintiff's Exhibit 3-U and is bulky but not hard to read. It shows the launching of this new invention. Numerous witnesses, including General Electric Company's Mr. Quinn—he was then the Manager of the General Electric Appliance Division and later became vice-president in charge of the Appliance Division of General Electric Company—and Mr. Zimmerman, who was then his assistant and later became manager of the Appliance Division of General Electric Company, and they have both had depositions in this case as to the tremendous impact that this announcement made upon the refrigeration industry as a whole. You heard the depositions of these gentlemen concerning the efforts of Frigidaire and General Electric to satisfy the public demand which was slowly creeping into their consciousness at this late date. They put out hydrator pans— [13] that is, Frigidaire did—and the General Electric Company put out two refrigerators bolted together and to operate at different temperatures, all to meet this problem of dehydration. That these great companies with their research departments had not previously seen the need or made any attempt to meet it is a tribute to the foresight of Mr. Bronaugh and Mr. Potter. It is more than that. It demonstrates that this invention was not obvious. In fact, it seems absurd to me to assert, as defendants do here, that the invention was obvious to all. The cold, silent facts of history prove how absurd that is. If it had been obvious, why didn't others

do it? They had the means at their command. It was a new combination of really old elements, and Potter and Bronaugh were first.

The defendants have challenged the operability of the Potter refrigerator which was produced in Buffalo, and we have met that, we submit, by demonstrating with defendants' own Exhibit 116, the little Potter, the newest Potter in the room I am sure you all recognize, which was identified by Mrs. Kobernuss. She was the home economist for the Potter Refrigerator Company in Buffalo during those early years. She identified it as the type which she sold and helped to sell. Mrs. Kobernuss has demonstrated the satisfactory operation of the refrigerators produced by Potter in Buffalo and testified as to having helped sell several hundred, all of which replaced conventional, almost altogether replaced conventional [14] electric refrigerators in the home.

Now, like any newcomer in an entrenched industry, the Potter Refrigerator Company in Buffalo encountered difficulties. Jewett could not supply cabinets for Potter. Apex and Sanitary who were, incidentally, licensees and substantial licensees under the Potter patent, gave up supplying cabinets to the Potter Company while they kept on supplying cabinets to other more established companies, the big ones in the industry. Cast your minds back again to the troubled times in 1938 and Munich in 1939, and the Blitzkrieg in 1940 and Lend-Lease, and remember 1941 to 1945. Eventually during this period steel was cut off for most civilian



uses, but in the period about which we are concerned, 1938 and on, other manufacturers were nevertheless able to obtain cabinets from the cabinet manufacturers and to put out electric refrigerators embodying the invention of Mr. Potter and Mr. Bronaugh. Potter was unable to do so as a newcomer in the business, and eventually there was nothing left for him to do but to bring suit in 1943 against one of the infringers. During the course of that trial, and of its outgrowth, the details of which we will not bother you with, a defect in the original patent appeared in the claims which required correcting. In June of 1948 an application for reissue of the patent to cure this defect in the claims was filed, and the Patent Office after carefully considering the matter [15] again granted a patent, namely the reissue patent here in suit, on December 14, 1948.

This suit, Ladies and Gentlemen, was filed here, the birthplace of the invention, in 1951. It was originally against two local defendants, as the Court has told you. The two manufacturing companies, Admiral and Amana, as we hoped and invited them to do, have stepped in and taken over complete charge of the suit and are responsible entirely, so that local defendants are not now involved in any respect whatsoever. Suffice it to say that the patent was held in this case to have been properly reissued—here this very case—and you are now here determining the factual questions of whether the patent is valid over certain objections which you have



heard the defendants advance, and whether the patent is infringed by the Admiral and Amana refrigerators of the two-compartment type.

You have heard that it has been agreed by all parties that the Admiral refrigerator here in Court, Exhibit 10-A, is representative of all Admiral refrigerators of this particular type, of the accused type, so that you need pay no attention to model numbers and can consider all of the Plaintiff's Exhibits 4-CC-1 to 4-CC-6, the Admiral Service Manuals those are and they are a little obscured because they are filed along with other papers in what is labeled "Answer to Interrogatories Addressed to the Admiral Corporation," and [16] I believe with that Exhibit 4-DD, the answer of Amana Company, go hand in hand. They contain the Admiral Service Manual and Plaintiff's Exhibit 8-A-1, this large chart to which I am now pointing, and other large charts—strike that—just this chart and large diagram here which to my mind most clearly represents what we are talking about. It is almost as clear as the physical exhibits, taken directly from these Admiral Service Manuals, and you may consider that as representative of all of the defendants' refrigerators.

You have also heard that it has been agreed between all the parties that if it is found that the Admiral refrigerator infringes the patent, then you may likewise find that the Amana refrigerator as herein exemplified by Plaintiff's Exhibit 10-B, the physical exhibit, also infringes. We have therefore

confined our testimony to the Admiral refrigerator illustrated in Exhibit 8-A-1, and we suggest that you confine your attention to that likewise.

Now to go back to the period following the war. The successors to the Potter Refrigerator Company have their patent in December of 1948. The patent has for the second time been examined by the United States Patent Office Examiner and been twice considered over the patents which are listed at the end of the copy of the patents. That is the certified copy of patent, Defendants' Exhibit 2-B. Incidentally, that list includes the most important prior art relied upon by the [17] defendants here, and that merely means that those prior patents were before the Patent Office. You will remember the Davenport patent, 1,731,711; and another, 1,769,112; and another, 1,769,117, and, above all, Anderson Patent No. 1,439,051. Those were all considered by the Patent Office. Now, Mr. Muffly, the refrigeration expert with his collection of 100,000 patents, who testified for the defendants here, said that the greater part—no, he said that a little less than half of that collection, a little less than 50,000, were issued prior to 1925, and he told you on cross-examination at the close of the defendants' case that in his opinion this Anderson patent was the closest prior art to the patent in suit. That is a great aid and simplification for all of us. Accordingly, we suggest that you forget all the confusing testimony about the Davenport patents and concentrate on Anderson as being the one most likely to

help you in determining whether Messrs. Potter and Bronaugh had an invention. One would think that a patent which had been twice passed by the Patent Office and had survived the litigation to which it had been subjected would draw people eager to produce this refrigerator of proven value, under a license. But Mr. Potter found that such was not the reality. Admiral Corporation was on the market with its Dual-Temp refrigerator. You will see from this stack of advertisements of Admiral Corporation, Exhibits 3-LL-1 through to the end of the series, that the [18] advertisements run from prior to 1948, the date of the reissue patent, right through to almost the present time. Here was a well-established company on the market that seemed to be appropriating the Potter and Bronaugh reissue patent after it had come out in December of 1948. There was nothing left to do but bring this suit.

You may have heard the defendants advance their argument that a patent is a contract between the Government of the United States and the inventors whereby, as the Court has advised you, the patentees are granted the right to exclude others from manufacturing, using or selling the invention for a period of 17 years. In this case, remember it is 17 years from the date of grant of the original patent and the reissue patent is substituted for the surrendered original patent as of the date of its grant, the reissue grant, which in this case is December 14, 1948. That means there can be no recovery for any period prior to December 14, 1948,

the original patent being surrendered necessarily in order to get the reissue. However, of course, the reissue cannot run from its grant for 17 years. It runs only for the balance of the life of the original grant, which was for 17 years from October 6, 1936, so that brings us to October 6, 1953, a little over two years ago when the patent in this suit expired, and there can be no recovery after that date. It has gone into the public domain. In fact, when this reissue patent [19] was granted, it had a little less than three years of its 17 years of life. Mr. Potter and his backers had taken the risk on this patent in 1931 and '32, and prior actually, and the company, as you will recall, was started in Buffalo in 1931. By 1951 it was realized by Mr. Potter and his backers that there was nothing left to do except to bring suit against the infringing manufacturers in an attempt to recapture the losses which he had sustained, or, rather, which, as you have heard him testify in his deposition, his backers had sustained. About one million dollars had been poured into Mr. Potter's attempts to establish his patent rights over that 27-year period.

Now we fully agree with the defendants' contention that a patent is a contract granting the right to exclude others from manufacturing, using or selling, but it is more than a mere contract. As I told you in our opening statement, we like to think of it as a headstart on competition. That is what we think a patent really is. You must look



back to the early days when the founding fathers of the Republic were framing the Constitution of the United States. In that Constitution they saw fit to provide that Congress shall have the right to provide legislation to promote the useful arts and sciences. It is under this constitutional provision that our patent laws were framed. We like to look at this as being one of the reasons for our country's greatness, the necessity [20] for which was foreseen by the framers of the Constitution. Remember that this was then a small country fighting the ties by which Great Britain hoped to draw materials from the wilderness colonies of America and utilized them in fabricating finished goods at home. This provision of the Constitution was framed in order to encourage new industries and to give the entrepreneur a headstart on competition. It does not always work out when the realities are known.

We think that defendants' quibbles in this case, if they were sustained, would be a travesty on justice, their contentions about vagueness, lack of words such as "fin coil" in the specification, no definition of "air" or air at 32° Fahrenheit and the like. Fortunately for this country and the encouragement of future inventions, we usually have applied common sense to these problems and have established the rule that the disclosure in a patent application is addressed to the person skilled in the art. In other words, if anyone skilled in that art can construct the invention by studying the patent in the light of his special knowledge in that art, then it does not matter that the i's were not dotted

and the t's were not crossed. You have heard Mr. Muffly, the defendants' own expert in the refrigeration art, state that he could construct a refrigerator according to the patent disclosure. Why should inventors be penalized because lawyers can quibble about words? We think you will [21] see the right solution to this question and decide it forthwith in plaintiff's favor.

Incidentally, it speaks cogently of the weakness of the rest of defendants' defenses in this case. The Court has told you that there is a presumption of validity in favor of a patent and that there is the heavy burden on the part of defendants of proving that the patent is invalid by clear and convincing evidence. He has also told you in the beginning of this case that the plaintiff, we, had the burden and the definite burden to prove infringement by a preponderance of evidence as we lawyers speak of it. We think these defendants have utterly failed in their attacks upon the validity of the patent by these technical quibbles or by anything else. I know that to me their only evidence in this case, as presented by their expert, Mr. Muffly, was anything but clear and convincing. In fact, I found it very confusing and unconvincing. The same is to be said about their attempts to invalidate the patent on prior art patents, some of which are not even prior. We suggest that you consider just one, for example, the patent to Lundgaard about which Mr. Muffly testified. You will notice that he was clear and convincing in most respects when it came to something about which there could be no doubt, such as there

being a cabinet present; but when he was asked the direct question in regard to the Lundgaard patent as to whether there was a "refrigerant expander in the cooling chamber," he equivocated [22] and the Court stepped in and asked him if his answer was "Yes" or "No"; whereupon, he said that there was a misuse of the word "expander" in the patent. The same is true about all their efforts in regard to the Davenport patents and others. The same is true of the Larkin patent. You will find in every one of the patents the admittedly—we have admitted these things—old patents of the Potter combination. If they were not there, the defendants would not bother to read them. There is a coil in one, certainly, a cold wall in another, a compressor in a third, and so on, but is that any clear and convincing evidence that other inventors anticipated the Potter and Bronaugh combination, invention combination of old elements, a combination of what is new, no single old element, and that is true of almost all patents in the United States. They are all combinations of things that were known before. We do not think that is the answer, and we trust you will not find it is.

You will notice that so far I have limited my remarks to the attack upon the validity of the re-issue patent in suit, since this is undoubtedly the first question which you will be asked to consider; namely, is the patent valid. We want you to consider the evidence in this order and in doing so we

suggest that you remember the one significant question which was answered by Mr. Muffly on cross-examination, that the Anderson patent was selected by him from his collection, [23] or by somebody with his approval, as the closest prior art, and dismiss the rest of the confusing testimony concerning the other patents, most of which have been considered in the past by the expert examiners of the United States Patent Office.

Also, in connection with the question of validity, we come again to a question about which there is confusing and unconvincing testimony, not the clear and convincing testimony required to overcome the presumption of validity of the patent. This has to do with the Larkin patent. The defendants have gone to great effort to try to plant in your minds that the mere substitution of a finned coil for a plain coil of the Anderson patent was all that Bronaugh and Potter did to solve this problem that had long plagued the refrigeration industry. [24]

We are certain that you see through this muddying of the waters and realize that it is the giving of the new and useful household tool of the modern dual-temp refrigerator to the housewife which Potter and Bronaugh first achieved. We have admitted from the very first of this litigation four years ago that all of the elements including the Larkin coil are old—and Mr. Bade, the service man, testified that he put a Larkin coil on the first of the experimental models. Potter and Bronaugh saw the need for and contrived the entire combination which produced an operative unitary structure in which all



elements co-act with each other; a single compressor operates to produce the desired results of moist cold humid atmosphere for preserving lettuce and the like in one compartment and for freezing meats and vegetables in another compartment.

What has Larkin got to do with this? The confusing thing which defendants have thrown into the picture and which we are sure the Court will straighten out for you in the instructions is in regard to the dates of the Larkin patent and others thrown against the patent in suit by these defendants. Remember and pay attention carefully to the Court's instructions as to when a patent becomes a part of the prior art.

Let us take the Anderson patent and examine it. [25] Certainly that was truly prior art. That is 1922 and applied for in 1918. But you have seen how the defendants' refrigerators depend upon the transfer of heat from the compartment liner to the tube which carries the expanding refrigerant through "permagum," which is defined in their own service manuals and in the Morton patent as being a mastic substance which is loaded with aluminum filings or the like so that it makes a good heat-conducting medium. In other words, it is just the same as soldering or brazing the coils together. That is the sticky stuff that we are all afraid to get on our clothes.

In Anderson there are pipes running around the inside of the upper compartment, which is just exactly like the old cold storage house which had been in existence since the turn of the century.

I really hesitate to move this to show you the old icebox. You heard Mr. Parker state that there was no mention in the Anderson patent of any control of humidity; no mention of moist cold atmosphere and, in fact, no teaching of the true problem of solving the concept of the combination of Bronaugh and Potter. Certainly, just as in the Davenport patent and others, there is a compressor or liquefying unit and there is an expansion valve. Certainly there are two coils in series, but this is nothing more than two compartments of the old dry-cold refrigerator. [26] What did that do for the housewife in 1922? Nothing which a one-compartment dry-cold refrigerator could not have done.

When you come to consider the Anderson patent, remember this and keep it well in mind: Mr. Muffly, the expert for the defendants, testified that there is a thermostat on the partition between the two doors of the Anderson refrigerator. If you look for it and carefully read the Anderson patent to find any such statement about the location of a thermostat, you will never find it. We have tried. There is mention of a thermostat on the first page. Incidentally, quickly after the mention of the thermostat there is a disclaimer of it as any part of the Anderson invention. Now, that is so much for Mr. Anderson's appreciation and solution of the problem.

Now, you heard Mr. Parker testify on direct examination that Anderson embodied a frosting coil in the upper compartment. Mr. Muffly did not offer any evidence of any test to the contrary. In fact, he

agreed that it did embody a frosting coil. A frosting coil, of course, is a moisture pump; that is what dries out your food. All that Mr. Muffly stated was that in his opinion it was the same as Potter and Bronaugh. And we are certain that you know how to evaluate that testimony when he has testified that he has collected over one hundred thousand patents during the course of his career since 1925 to 1930, almost [27] all relating to refrigeration, and that during that period of years he has been paid to search patents by all of the big refrigeration manufacturers except the two electrical refrigerator manufacturers, Westinghouse and General Electric. He is now on retainer of a number of refrigerator manufacturers and has recently, within the last ten years or last few years, done a number of jobs for Admiral and Amana. Remember that Mr. Muffly is not a patent lawyer, he is not registered to practice in the Patent Office, and that his livelihood since about 1940 has depended, at least in part, on his making searches for the refrigerating manufacturers.

We come now to the question of infringement, and here again all that the defendants can do is to quibble about words, and they do it in a confusing manner by confusing an unrealistic division of the language of the claim and saying "Yes" or "No" to only parts of an element of a claim. Their charts will be clear as a matter of English when you look at them. They say "Yes" or "No" as to whether these parts of elements are in the Admiral box or in the Amana box and as to whether they are in

the Anderson patent or in the Potter and Bro-naugh patent. They have a breakdown on their Exhibits 114-A to -D and some other 114 exhibits, -O to -R, inclusive, of each of the claimed elements of the patent, and they have applied these in a highly confusing manner. They are not even able to be consistent in their [28] own charts. They point to a thermostat in one position on Chart 114-A and the same thermostat in another position on a second chart—the same element for thermostat, 114-C, just as it suits their convenience so as to be able to twist the remainder of the phrase which relates to the thermostat.

Of course Mr. Parker has today brought out these differences, I think, very clearly.

Mr. Cheatham: That number was 114-B.

Mr. Cuninghame: 114-B instead of 114-C.

Now, in order to put the claims and their application to the infringing structure in their proper context you must go to the claims printed in the patent and read each element between the comma preceding that element and the comma succeeding that element. That is just simple ordinary rules of reading in between commas, those sets of elements. They have always been in the patent since it issued in '48. For example, the claim calling for a thermostat responsive to the temperature in the cooling compartment, when you get down to Claims 3 and 4, whereas Claims 1 and 2 call for a thermostat responsive to the temperature in one of the compartments; not a difficult difference. This is clear



enough to the defendants with respect to Claim 2, and their arrow from that element points up to the thermostat at the right-hand side of their chart in 114-A, the thermostat [29] which is supported by the upper freezing compartment. But in their Chart 114-B their arrow from the same element of the claim points to the thermostat which controls the by-pass valve and which is over on the other side of the refrigerator, the left-hand side of their Chart 56 of the Admiral refrigerator.

The answer to all this double talk is that the thermostat in Claims 3 and 4 is stated as being responsive to the temperature in the cooling compartment for controlling the on and off cycle of the single liquefying unit, the motor compressor unit down at the bottom of the cabinet. If, as defendants say with regard to Claim 4, the thermostat in the claim is the one on the left-hand side which controls the by-pass valve, they are deliberately attracting your attention to something else in the hope that you will overlook the thermostat which controls the on and off cycling of the liquefying unit on the right-hand side of the box. You have heard Mr. Parker read from their own service manuals and from the patent to the effect that the thermostat on the freezing compartment controls the on and off cycling of the liquefying unit and that this thermostat reflects the temperature in the lower moist cold compartment since the insulation between the two compartments is thinned out in that area so that heat from the moist cold compartment can

be drawn to the coil which surrounds the upper freezing [30] compartment. Common sense will tell you, in addition to the positive declarations in their service manuals and in the Morton patent, that if it were not for the power supplied to the motor in the heat pump the compressor of the liquefying unit in the bottom of the refrigerator, the heat in the moist cold compartment would stay right there since that space is normally closed by the lower door of the Admiral refrigerator and it would soon become a hot box rather than a means of preserving food in a moist cold atmosphere.

Mr. Parker testified that if the defendants' Exhibit 117-A, the moist cold compartment with its coils and the black goop on the outside, were all alone nothing would happen to the temperature in that box and no heat could be removed or withdrawn, as the patent says, from it by the secondary system on the outside of the box—to the outside of the box—withdrawn to the outside.

He testified that it is only when the two portions of the box, Exhibits 117 and 117-A, which make so much noise, are combined in the manner disclosed in the service manuals and in the Morton Patent 2,586,853, in a refrigerator cabinet that heat can be pumped out of the moist cold compartment and discharged to the air surrounding, the atmosphere, through the medium of the liquefying unit condenser.

I think I will stop reading for just a [31] moment. I ask you to look at it this way: In my simple language heat, of course, flows only from hot

to cold like water flows only from a higher level to a lower level. And in a refrigerator to make it refrigerate you have got to pump the heat up hill out like you have got to pump water out of a well. It's as simple as that. Now, just what does the pumping-out? Not this little secondary here which is wholly closed and has its own separate refrigerant—that is a whirlpool, actually; all goes around, and where does it come out if it were alone? In fact, what makes it work if it were alone? It is really an elaborate fin and a fin is a heat-exchange extension surface. It is a fin for this, the whole primary system. It is as if this had the fins of the Potter coil. Here is your liquefying unit and your condenser that gets rid of the heat in the atmosphere. Here is the refrigerant circuit going up to two coils in the primary circuit and in series with the same refrigerant in both. It goes first to this coil which isn't off by itself. Here are the bolts attaching it very tightly to this heat-transfer plate, secondary transfer plate—to this elaborate fin. It's a wonderful idea. A lot of patents have been issued on it. That is what the Morton patent is on. But that has nothing to do with us. You have improvements; you have patents of twenty-five years. So, here you have a system, the precise Potter system which I am sure [32] you understand. There is just nothing that could be clearer and simpler. It is the same refrigerant through two coils in series working in the same old way to get exactly the

same result with many recent improvements over the twenty-five years.

We now come to the points of absolute disagreement. Mr. Muffly has testified on direct examination that the cooling compartment is the space inside the moist cold compartment liner and that the freezing compartment is the space inside of the freezing compartment lined. I almost hesitate to go into it because we have heard so much about it. We ask you to consider whether an air space alone makes a compartment a refrigerating compartment or makes any kind of a compartment, as far as that goes. The only thing that makes a compartment is the physical structure which surrounds the air space; and I ask you, did you ever see a refrigerating compartment without insulation? The claims define a cooling compartment and a freezing compartment, and we ask you how there could be any such item in either of the infringing refrigerators or any refrigerator unless there were insulations surrounding the liners of the air space to hold out the heat from the outside temperature so that the liquefying unit or the heat pump, or compressor, or whatever you want to call it, can operate to withdraw heat from the compartment. [33]

We come now to another point of plain disagreement. Defendants say that the Admiral thermostat—Amana thermostat which controls the on and off cycling of the unit is outside of the compartment and not physically inside solely because it is shown in the reissue patent. And I emphasize the words “shown to be on the inside of that compartment”



in the patent. The thermostat as you will recall is this little thing up in the corner 31 of the reissue patent shown in the compartment.

Now, the defendants conveniently distract your attention from the fact that the claim of the re-issue patent does not say—none of the claims state that the thermostat must be physically inside of any compartment, cooling or freezing. That is just a matter of English. I want you to read it for yourself. The claims state that it should be only a thermostat, and I quote, “responsive to the temperature of one of the compartments.” That is in Claims 1 and 2 and it is the same language in the other claims.

Let us look to see what happens in a refrigerating system. Both parties agree that when the liquid refrigerant expands into the tube of the expander it extracts heat from somewhere. Where does this heat come from? Since the tube of the expander is inside of the insulation, it naturally draws heat from within the compartment. That heat is taken into the expanding refrigerant and raises its temperature. [34] The thermostatic valve which controls the on and off cycling of the liquefying unit in the Admiral refrigerator is right along side of the tube carrying the heat-laden refrigerant. It therefore responds to the temperature of the compartment from which the heat is drawn. That is what the claim says and that is all it means; no more, no less.

And now we come to still another point of disagreement. They say that the expanders called for

in all four claims—the cooling refrigerant expander and the freezing refrigerant expander is only the bare tube in which the expansion of the gas takes place. They neglect all the surface extension of that tube. We say that you must take the entire phrase again between the commas in the claims—these are the words of the claims of the patents and read, and I quote, “a cooling refrigerant expander having heat-conducting surfaces within said cooling compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature about 32 degrees Fahrenheit while withdrawing heat from said compartment.” That is the whole element of the claim. It is long, I know, but not impossible by any means. I think it is rather simple. There is no disagreement between Mr. Parker and Mr. Muffly that the actual temperature within the tube of the expander—that is, tube 25 in Potter—and the tube which conducts the refrigerant across the heat-transfer plate in the Admiral box must be [35] below freezing, or below 32 degrees. The actual surface of just the little tube itself which conducts the expanding gas may largely be or perhaps is always below 32 degrees. However, when you speak of an expander having heat-conducting surfaces, you are talking about the elements which extend the heat-withdrawing ability of the tube beyond the little surface of the tube. In the Bronaugh and Potter reissue patent this is exemplified by the brine tank in the freezing compartment. It has one vertical surface forming one inside wall—that is where the little ice cube sleeves

are and the vertical surface is to the left of it—one inside wall of the frozen food compartment. It also is further exemplified—and I think maybe I should have put this first—by the fins on the coil heat-expansion surfaces in the upper cooling compartment refrigerant expander. Those are closely spaced fins in tight contact, metal to metal, as explained, of course, in the patent and elsewhere; all well-known facts. Finned coils were old.

In these respective compartments these are the surfaces which extract the heat. They are part of the expander or evaporator or coil, whatever you want to call it, and conduct heat to the tube and thence to the expanding refrigerant within the tube. When we come to the infringing structure they say that it is the secondary tube on the outside of the surface which does all the heat extracting from [36] the cooling compartment liner. Why, then, do they feel it necessary to have all this labyrinth of loops of the tube of the primary system on the outside of the primary transfer plate and the coil of the tube on the inside of the secondary transfer plate which I pointed to a little while ago? Why do they instruct in their manuals that you must apply a layer of permagum, the heat-transferring gum, between the plates? Why do they feel it necessary to surround the tube on the liner of the cooling compartment with all this permagum? Why can Morton say in his patent, as he does, that this may be considered a fin? Mr. Morton is the Admiral chief engineer and chief patentee,

and I think the testimony of Mr. Siragusa was to the effect that he knew more about patents than anybody in the Admiral Corporation. Well, he can say it is a fin because the heat may be withdrawn from the compartment through the metal of the liner, through the secondary system, through the permagum between the heat-transfer plates and into the primary system. Otherwise it just wouldn't be a cooling compartment. The same is true of the freezing compartment liner to the outer surface of which the tubes are soldered or fixed thermally, I guess, and painted over. And, anyhow, it is a very close metal-to-metal contact.

And now we come to another point of disagreement. [37]

Mr. Byron: Of disagreement?

Mr. Cuninghame: Disagreement, d-i-s. And, in fact, this is a mere quibble, an effort to confuse this issue. It is with regard to a differential of insulation in the refrigerator. Potter teaches less insulation around the cooling compartment and more insulation around the freezing compartment. Mr. Bohman, the chief engineer—present chief engineer for Admiral, was asked the direct question, “Mr. Bohman, does the insulation of the cooling compartment in that exhibit permit greater heat inflow than does the insulation of the freezing compartment of that exhibit,” close quote. You will recall that I was referring to the Admiral refrigerator on the floor. Mr. Bohman answered the question with a question, and the Court asked him if he was



in a position to answer that question Yes or No. The question was then repeated as follows: "Does the insulation of the cooling compartment in Plaintiff's Exhibit N, the Admiral refrigerator, permit greater heat inflow than does the"—the witness again answered the question with a question. The Court then suggested—I think you will all recall it. It happened a few days ago.

I am getting a little short of time and I think I will skip this section.

Suffice it to say that this morning——

Mr. Byron: Read it. [38]

Mr. Cuninghame: Do you want it read?

Mr. Byron: Yes.

Mr. Cuninghame: Give me some more time if I read it.

Suffice it to say that this morning I heard Mr. Parker come back and tell us all about it on the witness stand and testify flatly—and there is nothing to contradict him—that there is proportional insulation in the Admiral box just as he testified earlier that he was sure there was in the Amana box and that that infringes Claims 3 and 4, which, of course, is all relative, differential or proportional, whatever you want to call it, but it has thicker insulation around the freezer than around the cooling compartment, and I do not want to try Mr. Bohman here.

Now we come to another play on words. The defendants claim that because of the secondary system in the Admiral or in the cooling compartment there is no "single liquefying unit" as specified in the

claims of the Potter patent. We ask you as reasonable ladies and gentlemen to consider the fallacy of this quibble, and to consider the fact that the words "single liquefying unit" are lifted out of context in their charts and diagrams. The phrase must be read in its entirety when construing a claim, and the phrase is "a single liquefying unit associated with said expanders and constructed and arranged to condense refrigerant expanded by heat extracted from both said compartments." That is the element. It is [39] not just the single liquefying unit. That is a much more intelligible description of what we are talking about. It is just a matter of plain English. You have heard the testimony of Mr. Parker, supported by the manuals, Exhibits 4-CC-1 to 4-CC-6, that no heat could be extracted from the compartments without the operation of the motor compressor condenser unit in the bottom of the Admiral refrigerator. The cooling compartment liner with its secondary system may be a very efficient, effective, and undoubtedly patentable system—and it is an addition, you do not have to bother much about it—that equalizes the cooling effects throughout the walls of the liner, but that is not in this case, and it cannot operate by itself. If it were placed in an insulated compartment without any electrical plug-in means, or any means of getting the heat, pumping the heat out of the cooling compartment, the insulated compartment, it simply would not make sense; it would not work. This all sounds quite obvious to me, and I wonder

why I talk about it. When it is placed in good thermal contact with the primary plate, as it always is and always must be, heat flows from the cooling compartment through the secondary system, through the secondary system contact plate, and the primary contact plate, into the refrigerant in the primary system and then is pumped out of the refrigerator by means of the liquefying unit in the bottom of the cabinet. There is absolutely no shadow of [40] doubt that there is a single liquefying unit in the bottom of the Admiral and Amana refrigerators which condenses refrigerant expanded by heat extracted from both compartments.

Now we come to the final point of disagreement and one upon which you may base your evaluation of Mr. Muffly's testimony. He has testified that he finds no humid atmosphere in the Admiral refrigerator—I had better read that again. He has testified that he finds no humid atmosphere in the Admiral refrigerator, and I refer you now particularly to Defendants' Chart 114-O which is the printed chart entitled, "Comparison Between Claim 1, Accused Refrigerators and Prior Anderson Cabinet." Go down that chart to the line marked with a numeral 5, but I think this is pretty detailed, and Mr. Parker has testified this morning and never marked these charts up with circles; but just to show where he disagrees from the opinions stated on the chart, and when you see a circle you know there is a disagreement, and you can think about it and make up your minds without a lot of people telling you about it.

Well, I cannot resist the fact that they certainly do a lot of advertising, and they certainly put a lot of labels on their refrigerators, and in their service manuals a lot of directions if they don't have a humid cold atmosphere in them. I do not think you can say much more than that. [41]

Have I talked an hour and a half, your Honor?

The Court: No, you have not. You have talked an hour and twenty-two minutes.

Mr. Cuningham: Well, I think I will come to a subject that we have not had much testifying about or much talk about. That is the question of damages which will, of course, as the Court will tell you when he gives you his instructions, for you to determine. You will recall that Mr. Parker was asked a hypothetical question last week, I believe, as to his opinion of the value of a reasonable royalty for the manufacture and the sale of refrigerators like those of the two defendants here. His opinion was given as 10 per cent of the amount received by each defendant for each refrigerator complained of in this case. The evidence shows that 164,173 Dual-Temp refrigerators had been sold during the life, five years life, of the reissue patent and that the Admiral Corporation has received for such refrigerators a total of \$41,864,360.87. That is all in Exhibit 4-CC, the Answers to Interrogatories. There is no dispute about these figures. They are admitted figures, and that the Amana Company has during the same period—that is the five-year life of the reissue patent—made and sold 4,232 accused refrigerators of the models specified, FR-9



and FR-9-S, and has received for such refrigerators a total of \$1,012,567.80. That is in the Amana Answer to Interrogatories No. 4-DD, which will be available to you. [42]

So just to sum the whole picture up, that is the verdict we ask you to bring in, 10 per cent of these dollar receipt figures. That would be \$4,186,436 royalties from Admiral and \$101,256 royalties from Amana, totaling \$4,287,692. Do not let this amount stagger you. It is only about six per cent of the retail sales price of these refrigerators to the public, what the man on the street pays. Remember that this is the climax of a 25-year struggle—27-year struggle, or 25, to enforce this patent which has few, if any, equals in the patent history of the United States. Over one million dollars has been invested in this effort over that period of years, and many, many people have contributed to the effort.

Admiral licenses, they have a license that was referred to in the hypothetical question, a license, a rubber gasket on the outside of their door—it is shown on the exhibit here as a little tube—at 2½ per cent for a gasket gadget patent compared to the type of invention you have here in this suit; not just a new model but a new idea in household refrigeration, so do not hesitate to bring in these two verdicts if you feel satisfied on the evidence in this case that the plaintiffs are entitled to that amount as just compensation for the infringement suffered at the hands of both of these defendants.

Thank you for your very courteous attention [43]

which you have given to our troubles here. It has been indeed a pleasure to work before you.

The Court: Ladies and Gentlemen of the jury, we will take a ten-minute recess.

(Recess taken.) [44]

The Court: Mr. Ramsey.

Mr. Ramsey: May it please the Court, Ladies and Gentlemen:

It has been some little time since we started, and you may have forgotten somewhat the statements made in our opening argument. At that time I said I did not know exactly what the plaintiff was claiming, what the issues were, what they were talking about, and, frankly, I am advised a little bit more, but still the issues are not clear as I see it. I think the easiest way to start out is on ground that both sides have in common.

The defendants contend that the Anderson patent is the closest one, and that is because the Anderson patent is held by, or was owned by, the predecessors of these plaintiffs, of Potter, and was put on the box, and it is on the Potter refrigerator, the one over there to the left, and they operated under it from the time Mr. Potter bought it in 1931 until it expired in 1939. It is agreed also that the only difference between Anderson and this patent in suit is something having to do with finned coils. They see, or contend they see, in Figure 2 in a side elevation a square, and they say that is a finned coil and that makes it different from Anderson. We do not see it,

and I think all the argument in the world through experts' eyes, through lawyers' mouths, won't change a thing. You can look at it, and you can consider [45] it, and you are mature people.

This is a fact, and you can also bear in mind that the patent is entirely silent on it. There is no word in there about a finned coil, and this case rises and falls on that. In other words, they say, "We improved Anderson in effect by adding some fins to Anderson's coils." Why? They said because if you put fins on it it does not frost, but you remember the last thing Mr. Parker said. We were very surprised. They asked him whether he looked at it and saw any frost on it on a coil in the Potter refrigerator, and he said, "Yes, there is some ice on the pipe on the first two or three fins." Well, that is exactly our position. And, also, he says there is no such thing as a non-frosting coil, it will frost if you put a certain amount of refrigerant in it, and it will not frost if you put another amount.

This claim I like to think, at least, is something like a description in metes and bounds of a piece of property. I think I used that analogy in opening. An infringement is something like trespass on land of someone's personal property, and it is necessary to define this measurement. You have to have your fence-line around it to advise the people where your land begins and where it ends, and that is the point, and that is required of a patentee. He has to claim it clearly and distinctly, not vaguely, not so that the fence-lines can be shifted around or they can be altered one way or another as suits their will. You

will remember, and I know that there is nothing more boring than hearing lawyers drone over instruments, what is a file wrapper and what do they say, but I know you paid very careful attention and you have paid careful attention to it. I will summarize, and I think you probably have heard those various references that were showed, and if you have any doubt they will be in the jury room with you so that you can see them, and the file wrappers will be there, and you can see what was said with regard to these claims. In other words, you have to be consistent. They mean exactly the same thing when you ask for them as they do when they try to say, "My fence-line is over here someplace." In other words, you get paid for something by teaching something, and you do not get paid for anything more than you teach.

What did they teach? They said they taught a finned coil. Whether they did or not, and let us assume that they did, and it is easier to say that they did, but the next question is, so what? Did you invent something? Well, they said that produces a non-frosting condition. Their own expert says it does not. I say it did not. There is no such thing as non-frosting, but you will possibly remember of them reading the depositions, and it is hard to pick things out of them, but the mechanic that originally devised this, Mr. Bade, said, "We put in enough refrigerant so that the frost line runs about halfway up so that one part frosts and the other part does not." We think that that is absolutely



true. You would not remember the incident, probably, when Mr. Potter was giving his deposition, but he began to laud a certain author, a fellow by the name of Hall, and he said, "Now, Mr. Hall recognized my works. He is one of the best-known men," and he read a little squibble, but he said, "I want to make a little change. Mr. Hall says that my invention is a frost-defrost cycle. Actually, it is a non-frost." Well, there is a great deal of difference, and I do not know whether you got the difference. In other words, a refrigerator works on a cycle, and it is just like in your house, when you turn on your heat and your thermostat comes on it comes on to a certain temperature, then drops down and comes on again. In other words, if you had it right on the dot it would be running all the time or going on and off all the time. So this frost-defrost, they have it cold enough to produce some ice, and it raises up and melts off and comes on and then comes on again, and that is called a frost-defrost.

Now, when Mr. Potter and Mr. Bronaugh in this patent in suit asked for a reissue they said, "This patent is different and this is not for the mere result but this is different, and we will define it very carefully, and this [48] does not mean one of a frost-defrost type. This means non-frosting." And here at the very end his own expert says it must be frost-defrost—certainly.

As far as these defendants' machines are concerned, they have knobs on them, and you do not have to be an expert to know how to run a refrig-

erator. I think most people are familiar with refrigerators and know they have knobs on them, and you can run them as cold or as warm as you want. I think the same thing is true of Moist Cold or any other type of refrigerator. There are knobs on these refrigerators as was shown to you when Mr. Muffly was here, and you can set them up normally where they are nicely in balance, not too much frost, maybe none, and maybe if you get them on the button they might not frost at all. If you get them a little colder, there will be frost then on the up-cycle; there will be frost. If you turn clear down to the bottom, they will frost and accumulate frost, and that usually is not a good condition. In other words, that is a situation that usually you want to avoid; but if you have a lot of things you are going to put into the refrigerator and it is going to be warm you are going to have a little frost and will have to make it go longer to bring it down, and it is adjusted to meet the situation, and many manufacturers provide it.

So the first thing: Is it non-frosting or is it frost-defrost? If it is frost-defrost, we have no lawsuit, for plaintiff explicitly said to the Patent Office, "We disclaim that. That is not infringed. These claims that are secured to us, every single claim, to 4, all had that same limitation in them." Also, another thing, they also have to have some kind of a finned coil because that is their only contribution. That is what they paid or say they paid for this patent; They bought a finned coil in a certain organization.

Of course, it was reorganized, and it is the Anderson organization, but whether they did or whether they did not it is for you folks to say. Possibly you remember.

As I said when we started, there was going to be a lot of complications; there will be a lot of things, a lot of technical things that sound difficult, but always in every case it develops to simple things such, for example, as the claims that that coil has to be within a compartment. We have experts and lawyers and everything—you know what it says; you know what a compartment is, and you can see the picture, and you can see what the number is, and you know. You either think it is inside the liner or outside the liner. You know what a compartment is. A compartment is a bounded space, and in this Potter-Bronaugh it shows—I do not have it here, but you will see it has a metal liner around it. In the Admiral and in the Gibson, which is a cold-wall type, and it is conceded they are different types, it is not in the space at all; it is around the back of it. They have not discussed why they want to have blank walls—that is, unobstructed walls—in the inside of the cooling compartment. You housewives particularly would know that a blank, bare surface, you can keep it cleaner, and you want things kept clean, and I suppose that that is why the housewife and the refrigerator owner wants them. At least, the manufacturer tries to supply what people want.

Just very, very briefly, you have to state an improvement in something. It has to spring from

something. It has to have some base of what we call prior art in our particular jargon, and that is the state of the art that exists when a person enters it. Now, you will remember that, and we are very fortunate to have Glenn Muffly here, one of the pioneers in the refrigeration art, and he testified to what the art looked like in 1925 when he came into it and said that there were cabinets, double cases, two temperatures, two humidities, and then named the manufacturers and said they were old and well-known in that art, and he was impressed by that and thought that probably the public would like to have that kind of a refrigerator and was working for one of the early refrigerator manufacturers, and so he built three or four of them, but the market was not ready for that, and even the plaintiff's witnesses, the G.E. men, you will remember their testimony said, "We didn't do it because the [51] public would not buy it, too expensive, so we have had to build refrigerators that are within the public pocketbook." And, as counsel for plaintiff has reminded you, there were some pretty lean days in the '30's, and there were not very many mechanical refrigerators in those days. The buying public is the one to be served. You can't say that you ought to buy a lot of expensive things if we do not have the money to do it, and, seemingly, the people that employed Mr. Muffly said, "Let's get the price down first." The war came along, and I suppose the buying public is used to spending more money for refrigerators, and maybe that is the reason that they



liked this type of refrigerator and like the refrigerators generally. I am kind of off the track, but I mean that is just the picture. [52]

Now, concerning the Patent Office, the Examiner, for some reason, didn't find that Larkin patent and it wasn't cited against the application here. And there is no question about it. He testified we weren't there but they said—Potter and Bronaugh said what we did was to buy a Larkin patent and put it in the box and we bought it for its purposes, put it in the box and put it that way. So we bring in the Larkin patent which teaches all that.

Now, that certainly couldn't be an invention or he couldn't be paid twice. They take a Larkin coil and use it where it was intended to be put in. But the Examiner didn't find it. Then, also, during that time there was before the Patent Office the Gibson patent which is the one under which these defendants have bought and paid for and operated their license from Frigidaire.

You remember the testimony of Mr. Morton, the Chief Engineer of Admiral, and he said that when we started in 1944, 1945, steel was in short supply and we couldn't supply civilian goods and I was trying to build a two-temperature refrigerator and I worked up the best design I could, and after it had—we say “jell” if the design is complete—we had a thorough search made of all patent records. We tried to find out whether we were going to cross anybody's fence line. So people advised us that we might be in that man's property and this man's property and that man's [53] property, so we

took a license and paid licenses to everybody that we thought might be involved. And the licenses were granted to them.

Now, one of these licenses, I say, was one to Gibson, and that is the one under which they operate. I think that patent has expired. Yes. That has expired. But during the life of the patent they did pay rent for it, the agreed rent. That was in the Patent Office before Potter was. And, naturally, the Patent Office can't grant a monopoly to two different people for one idea, and so if they think that anything is close they declare what is called an interference. Well, that is just a contest between two people to see which is earlier.

But, before they can have such a contest, they have to be asking for about the same thing, and it is very persuasive. Now the cold-wall type of refrigerator is a different type than a coil in the compartment, and the Patent Office didn't declare interference. There was no contest in there.

You can either spell it one of two ways: Either the Patent Office made a mistake or there was no conflict in fact. I think I am inclined to think the latter, and that is particularly true because later in 1936 on this second patent of Potter he put in an application and he was arguing himself about the difference between finned coils and cold [54] wall, and he was arguing about whether his coil is within the compartment or outside of it and he was then met with the Gibson patent. He says, "Well, obviously it isn't. Obviously around Gibson's, which is a cold wall, the expander is on the outside of it."

The Court will probably instruct you as to the meaning of "patent" and "patent claims" and will instruct you that they have to give reasonable intendment to the language of a document. That isn't peculiar to patents. That is true of any contract or of any agreement. And no one forces a man to write certain things into his claim. He does it voluntarily and he is, what we say in law, the scrivener of it. He is bound by what he writes. It is up to him to particularly point out and he does it, and the Examiner says "No" or "Yes," or sometimes by agreement he says, "Well, if you will change this a little bit, I will change that and I will agree to it."

Now, all we have to go on here in this case is a definition of what the plans are. I imagine this must be awfully boring, this question of inside and outside, and I am going to just be very brief and I am not going to make a speech and I am not going to approach anywhere near to it and bore you. Referring to Mr. Muffly—and we will go back to the first one, what we are talking about—we have all agreed Claim 2 is a broad claim and if—that is the one that is controlling, underlying all of the other three claims. This No. 5 that you have heard so much about, this cooling refrigerant expander having heat-conducting surfaces within said cooling compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32° F. while withdrawing heat from the compartment whereby air in the cooling compartment is cooled thereby to a temperature of above 32° F. and is maintained at a humidity whose relative

value is at least 100 per cent at 32° is just a finned coil. I mean that is supposed to define it. But Mr. Parker says that the only thing that can mean in Potter is a finned coil.

Now, the important words in there are this word "within," and, as I say, you have to make up your own mind, is it within that compartment 14 that Potter says and argues for? Later, you remember, in his second case he is talking about "within." We will leave that one. I think that has been beaten to death, but it is important.

The next one is—I must preface this just a little bit. A patent element has to be defined in terms of structure. You remember that you have been hearing structure, functional result. He can't do it by function, you can't do it by results; you have to do it by structure, particularly if it is a point that we call the sole point of novelty or a point of novelty. Now, it says "constructed"—"that is constructed and arranged to maintain its heat-conducting surface above 32° F.," an element maintained always above. And that is the definition he put on it when he was asking for it particularly in the reissue. So I suppose it goes without saying that if it gets to 32 or below it isn't maintained there and he doesn't—Parker said—the last thing—it frosts. We say ours frosts. You can change it around but even one of the models which he has in the manual, that is the way it is designed, frosts on normal operation. Some of them may like to have it nicely bald, and you remember the manual says that it is kind of hard to do at the factory. You have to vary it for



altitude and load and all that sort of thing. That is a question, that "maintain." It has some inherent thing in the cooling coil, some inherent thing that prevents it from going under 32°. Both sides say no, it hasn't anything like that. So, Mr. Muffly says, "No. No; that is a function of the thermostat." You set the thermostat. If you want it a little colder, you set it down; if you want it a little warmer, you set it up. But you don't change the cooling coil any. That just stays there. As a matter of fact, you can take a cooling coil and you could make a—probably you could make a steam pipe out of it or you could make any kind of a pipe out of it. You could put it down in the freezing compartment. That is just an inanimate tube. There is nothing about that that is constructed and arranged unless there is something mysterious about a finned coil or something. So, but, the maintenance has nothing to do with it because they said a "finned coil" cannot be maintained. They say it is just the way you operate it.

Now, you get on 6 which we don't put any great stress on. That is the cooling compartment. They say that is a function of the thermostat, too; that it will freeze if you turn enough refrigerant in and it will not freeze if you don't. It is almost that simple. So we say, "Well, we don't have any function of maintaining an arrangement constructed." You could run it so it wouldn't frost. You could freeze it or take it to zero or 10 or 20 above or below; it makes no difference as far as the coil is concerned.

Now, this 8, 9 and 10 are something that you will remember. Maybe you will remember. As I say, it is dull. While they are wriggling around trying to get claims in and they are met first by Anderson, and Anderson says—and the Examiner says about Anderson, “Why, he has got everything that you have shown.” And then he says, “No. He doesn’t have a non-frosting coil.” Well, he does. Why doesn’t he? Well, because he has to put some liquid refrigerant in it. It won’t get cold enough. But they didn’t tell the Examiner at that point that they do, too. But they left that impression with the Examiner that they didn’t. They didn’t say [58] truthfully, “We don’t.” But, he says, “Why, ours is different from theirs because they have to put liquid in it.” But they are all agreed that so do they. And you can’t do it without putting part of that refrigerant in in liquid.

Then they got by that hurdle. Then, the next ones they got by or were faced with were the ones—the Davenport ones where the refrigerant is partly a volatile refrigerant and partly is air, and that provided one of these combinations that showed in these combination freezers-refrigerators, controls for both, and they said, “Well, a moist cold climate, humid climate,” and everything. “Look! That fellow shows it, too. How did you differentiate with his?” “Well, we use only volatile refrigerant, and that is much simpler.” So that is the meaning of this word “sole.”

And then they got over to this group of Lundgaard, Curtis and Barnes, and they—we have only

asked you to consider the Lundgaard one. He says, "But, look! They have got a non-frosting moist cold climate in that combination. They have got a freezer and a refrigerator and a non-frost moist cold just like you have." "Well, yes, they have, but they use—they have a cold plate down in the refrigerator half, and they blow air over that and they have to use this draft of air which goes up and down this stack and at 34° Fahrenheit."

So, it is true they have got a non-frost, but they do it differently, and we have only one that runs between 1 and [59] 2. They obtained those claims and those representations with those differentiating qualities. But we don't use them, and they may be all right.

I don't know anybody that does use them, but as far as people that I represent they feel that they have to have a primary, secondary; they have to have a cold wall with all of its advantages, and so they do. So, as far as infringement is concerned there isn't any. As far as validity is concerned we don't think the man invented anything. He didn't disclose anything new. He didn't do a thing over his own patent that he bought from Anderson and operated under for a long while.

Now, the reason I say that is that when they started out you will remember those claims. He thought that they invented a combination freezer and refrigerator and put in claims for it. The Examiner immediately said, "No. That is old." So, then, they asked him for reconsideration. "No.

There is another one." Then we later found out there are some 20-odd of that type. That is on the back of a patent, the reissue patent, and you will have that with you. Look at them. Look at any of them, if you want to, if you have any questions. I think, however, that you do understand.

Then, when those claims were rejected and the man's attorney said to them, "I don't think we have got anything," he got discharged for that and for another reason [60] that appears in the record.

Now, that is the reason, I think, that when they started out they didn't have this thing in mind at all. It isn't reflected into the specifications or reflected by the claims.

The first claim that ever was put in was 1932, and this was filed in January or February of 1931. So I think this is something they couldn't get what they wanted, so now they are trying to find out something that they can wangle out of the rest. It is for that reason—and you possibly have forgotten—it is for that reason I said to you at the start they took one position to get a patent and it is a very narrow patent and of doubtful validity. We don't think it is valid at all, but it is very narrow.

Then, they get it and they try to say it is very broad. Then, they have got to go back in again, say it is very narrow. They say these little things don't cover this and don't cover this, and now they are out again, and it is of world-shaking importance. You can't do it. You have got to be consistent.



Whatever they have, if it is valid, more power to them. If it isn't valid, an invalid patent should be taken off the books and shouldn't be put out as hurdles against anybody. But, as far as we are concerned, we don't use it. We use an entirely different system. We entered the field—both factories entered the field, looked through the patents, [61] paid their interests to people, paid a license fee, asked for them, got them, and are operating on them, and it is this one and it is agreed that this is the same. That is the one that we are operating on and not the Potter; nothing close to it. By their own claims we are not close to it. That is our position. [62]

### Plaintiff's Rebuttal Argument

Mr. Cuninghame: Mr. Ramsey, as I understood him, sort of hung his hat on the theory that the defendant had gone down one road, the cold-wall road, and at that time the Potter patent had gone another road, the finned-coil road. That is what I think he tried to say. And he said, therefore, no infringement existed. He says, well, maybe it is valid, but it is pretty narrow and ought to be limited to that finned-coil road. That is what I got out of his talk.

Well, you may wonder why we failed to cross-examine the only witness that took the stand for the defendant. We did, really. The reason was that our theories completely missed. Mr. Muffly did, as we understood it, meet the position we have maintained in this court for two or three weeks on infringement. In fact, he did even better for us than

we expected. He said on the record—and I will quote him from the transcript, Page 1303—I quote Mr. Muffly:

“You can do anything with the sheetmetal evaporators like Davenport that you can do with a coil.”

Those are his very words.

Now, of course, Potter isn't limited; we all know that. That is just a finned coil. The testimony is that he could have used a brine tank. In fact, the testimony is, from Mr. Bronaugh, as I recall it, that they did try out a brine tank in the cooling compartment and later settled on the finned coil as the cheaper and handier and easier thing to get. But the whole point is it is an extended surface and anyone knows the relationship between the surface temperature of a large area and a smaller area. There is that difference, you see, and Mr. Muffly was not mentioning a very deep fact but certainly an obvious one, that you can do anything with a sheet-metal evaporator that you can with a coil.

Mr. Muffly even did better than that. Transcript Page 1277: He pointed out that—well, you remember that Mr. Byron and I had a little tiff about the little finned coil showing in the patent whether it was in Figure 1 or Figure 2, and so on. Mr. Muffly said in the record at Page 1277:

“This coil leads into a rectangle which might be a brine tank,”

and it might. We don't think it is. We think it is a diagrammatic showing of an extended surface coil; that is all there is to it. Of course, a sheetmetal expander or Mr. Gibson's aligner on these things here

(indicating), they are all expanded surface coils working from a little round expander-evaporator, whatever you want to call it. So we knew, of course, that that was the distinction that was [64] attempted here. There seemed to be no reason to examine Mr. Muffy on that and, of course, the fact that there is no word about a finned coil and the limitation about a finned coil expressly in the patent is true. It would have been an improper definition of the invention to limit it to a finned coil.

These are all, in a sense, finned coils, expanded surfaces, and they work in the same way so that your heat-transfer surfaces don't have to get below 32 degrees where they touch the air that comes out of the food and dehydrate it. That is one of the reasons.

Now, there may be some confusion in your minds—it would be natural, I think, if there were—as to why Potter bought the Anderson patent in 1922—why he bought it in '31. Well, it shows and claims the series expanders from the one liquefying unit. It doesn't claim anything about finned coils or disclose them or teach them and it lay fallow for, oh, ten or eleven years before Potter discovered it in a patent search in connection with his own application and felt that here was a man who taught something that he was using. It wasn't something he invented, but that patent was unexpired in '31. It didn't expire until '39, and it had eight more years of life. Well, being a pretty straight-forward fellow, he bought and paid for the patent because he

felt that he had to use it in order to use his invention. Now, the Judge has told you that a patent is the right to exclude others from using your idea and not the right to use your idea yourself. It is just what made Potter buy the Anderson patent. There may be a prior patent that prevents you using your own idea, but the prior patentee can't use your idea. Anderson couldn't have used Potter's invention had he wanted to, even though Anderson was prior, because they weren't one and the same thing. In fact, Anderson made not even any attempt at humidity control. He didn't try to solve the problem. Of course, he didn't do it. But, nevertheless, Potter, who did solve this problem of dehydration and the other problems needed to use the unexpired Anderson patent. That is the way our patent system works, and if you think about it it couldn't work any other way. You would be all mixed up if it did. It is a limited monopoly to exclude others from using your idea. It isn't a limited monopoly to you yourself to use your idea if in doing so you conflict with somebody else.

Mr. Potter being a pretty straightforward businessman decided that he would pay for this Anderson patent because he had to use it for eight years remaining of its life when he wanted to bring out his. He didn't want to fight about it. He was pretty naive, I guess, in this vale of tears when you look at his experience and what he did for his headstart in the business. Why other people don't realize the work and the labor and the property and the value to the [66] public of patents like Mr. Potter did



when he bought the Anderson patent, I frequently wonder. And these defendants have made the figures I have quoted to you utilizing this invention. The defense in this case of non-infringement is ridiculous. Thank you.

The Court: We have finished sooner than we anticipated, but I am not going to instruct you tonight. I am going to instruct you tomorrow morning, because if I instructed you tonight, in the first place I couldn't do it, in the second place I want you to listen carefully to me and what I have to say because I have got the final say. Even if you didn't understand some of the things that these attorneys have told you, I am going to put it in simple language for you and tell you exactly what you have to decide and the issues you are going to have to be concerned with and what the law is. I am going to try to make it as explicit and clear as is possible.

Juror No. 2: Your Honor, is that the time when we are going to be permitted to make notes?

The Court: Yes, if you want to. I will tell you, though, I don't think you are going to have to make notes. I should have told you that you could make notes during this argument, but I forgot about it. It may very well be that I will have a transcript run off of my remarks and then if you get into any difficulty we will let you see what I did say. That might [67] help you. I will tell you now that you haven't heard one of the most important parts of the case and that is coming tomorrow, so please

don't make up your minds as to how the case should be decided until after you have heard the instructions.

You are now excused until 9:30 tomorrow morning.

(Whereupon the jury was excused.)

The Court: I want to announce now that all persons who have been subpoenaed here on behalf of either side are now excused from further attendance at the trial if there are any such persons. Secondly, I want to say that tomorrow I will begin to instruct about 9:30 in the morning. Under the rules that we have here no one leaves or enters the room during the giving of the instructions, so unless you are here at 9:30 you are not going to get in. Counsel, of course, would have a right to come in, and we will wait for them. I work on these instructions, I prepare them, and I don't want any distractions; and, therefore, if you want to come here, you are perfectly welcome to come, but we don't want any moving around. Just sit in your seat and stay there. There will be only one movement, and that is at the end of one hour there will be a change of reporters; that is the only change, and that is the only break that there is going to be. Then as soon as the reporter comes in we will stop and the new reporter will take his place, and then we will start in again. But I don't want any interruptions other than that. I am going to continue to work with Mr. Kolisch

and Mr. Cheatham on the interrogatories and some of the final instructions. The instructions will take approximately two hours.

Recess until tomorrow morning at 9:30.

(Whereupon proceedings herein were adjourned to December 1, 1955, at 9:30 a.m.)

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United States District Court  
District of Oregon

Civil No. 6016

MOIST COLD REFRIGERATOR CO., INC., an  
Oregon Corporation,

Plaintiff,

vs.

LOU JOHNSON CO., INC., an Oregon Corporation,  
and MEIER & FRANK COMPANY,  
INC., an Oregon Corporation,

Defendants.

and

ADMIRAL CORPORATION, a Delaware Corporation,  
and AMANA REFRIGERATION, INC.,  
an Iowa Corporation,

Defendants-Interveners.

## COURT'S INSTRUCTIONS TO THE JURY

The Court: Ladies and gentlemen of the jury:

At the commencement of this trial and at various times throughout the trial, I urged you to listen carefully to the evidence introduced by the respective parties and not to make up your minds as to how this case should be decided until you heard all the evidence, the arguments of counsel, and the instructions of the Court.

In spite of the length of this trial and the numerous recesses, you have shown a great deal of patience and have paid careful attention to the testimony of the witnesses and the arguments of counsel. At this time, I desire to express to you my sincere appreciation for the way in which you have performed your duties. It is now my privilege and my duty to instruct you as to the law which governs this case, and I hope that you will pay as close attention to my instructions as you have to the evidence and the arguments of counsel.

This case presents a number of issues, and it is the duty of the Court to instruct you fully on each of such issues. Some of them may be covered by only one instruction while others may require several instructions. You must not allow yourself to be influenced as to any question or issue by the number of instructions given you upon such question or issue. The Court does not intend to stress the relative importance of any question of fact or law either by the [1484] number of instructions given you upon a particular proposition or by the order in which the instructions are given.



It is your duty as jurors to follow the law as stated in these instructions and to apply the law so given to the facts before you. You are not to single out one instruction alone as stating the law, but you must consider the instructions as a whole. Regardless of any opinion you might have as to what the law ought to be, it would be a violation of your duty to base a verdict upon any other view of the law than that set forth in my instructions.

You have heard the arguments of the attorneys. As they themselves have told you, what an attorney says, either during the course of a trial or in his argument to you or to me is not evidence. The attorney is not under oath and his duty is a partisan one to his client. The purpose of an argument to a jury is to suggest inferences and deductions which the particular attorney believes can be drawn from the evidence. While you may follow the inferences and deductions that are made to you by a particular attorney, if they seem reasonable and logical to you, you are not bound to do so.

It is the duty of the Court to admonish an attorney who, out of zeal for his cause, does something which is not in keeping with the rules of evidence or procedure. Do not draw any inference against the side to whom an admonition of the Court may have been addressed during the trial of this case. In order to determine the issues and the interrogatories that will be propounded to you, it is immaterial whether you like or dislike one or more of the attorneys who have appeared in this case or

the manner in which they or any of them presented evidence or argued the facts to you or to the Court.

You are the sole and exclusive judges of the facts in the case and you are bound only by the testimony and the other evidence which is before you. You are to decide the questions that are to be propounded to you solely upon the basis of the evidence that has been introduced at this trial, that is, the testimony and exhibits which have been admitted in evidence, without any feeling of sympathy, bias or prejudice for or against either the plaintiff or the defendant. If you have acquired, or believe you have acquired, any knowledge or information concerning any issue involved in this case from any source, other than the evidence, you are not to convey such information to any other juror and you are not to consider it yourself.

In the trial of a case, the function of the judge, or as we say, "the Court," is different from that of the jury. It is the function of the Court to lay down the rules of law that govern in the trial and preside therein and to see that the trial is free from error. The Court must necessarily rule on questions of law throughout the case. These rulings on questions of law have, so far as you are concerned, no relation to the questions of fact. It is your duty to ignore any evidence that is ruled out and, when a witness is not permitted to answer a question propounded by an attorney because of an objection interposed by an attorney for the other side, you are not to speculate on what might have been

proved if the ruling had been otherwise and the witness had been permitted to testify.

A judge of the Federal Court has the power to sum up the evidence and to suggest conclusions thereon, that is, he has the right to comment upon the facts of the case and he may also comment on the credibility of witnesses. In this case, because of the long recesses, numerous depositions, and the highly technical character of some of the evidence, I shall avail myself of that privilege primarily for the purpose of clarifying the issues.

Ladies and gentlemen, I shall not comment on the evidence in this case. I have that privilege, but I am not going to do it because, under the law, you are the sole and exclusive judges of the facts. I think the case has been fully and fairly tried, and I am going to leave the questions of the credibility of witnesses and the facts solely up to you.

Insofar as I lay down for you rules of law, you are required to follow them because it is the exclusive [1487] province of a judge to instruct you as to the law that is applicable to the case, and it would be a violation of your sworn duty to base a verdict upon any other view of the law than that given in my instructions.

I have stated that I do not propose to comment on the evidence. Therefore, if any of you know what my attitude is towards the questions of fact that will be submitted to you, you may disregard my opinion for, as I have stated, under the law you are the sole and exclusive judges of the facts and the credibility of all witnesses.

During the course of the trial, I occasionally asked questions of a witness in order to bring out facts not then fully covered in the testimony. Do not assume that I hold any opinion on the matters to which my questions related.

In a civil case such as this, the burden of proving an allegation by a preponderance of the evidence is laid upon the party making the claim. In this case the plaintiff has the burden of proving certain issues and the defendant has the burden of proving certain other issues and from time to time, in the discussion of the issues involved in this case, I will tell you upon whom the burden of proof rests.

Preponderance of the evidence does not mean the greater number of witnesses but the greater weight and the convincing character of the evidence that is introduced. In other words, you are not bound to decide in conformity with the declarations of any number of witnesses which do not produce conviction in your mind, as against the lesser number or against a presumption of law or evidence which satisfies your mind. The direct testimony of any witness to whom you give full credit and belief is sufficient to establish any issue in the case. Every witness is presumed to speak the truth. This presumption, however, may be overcome by the manner in which he testifies, the character of his testimony, or by evidence affecting his character or motives or by contradictory evidence. If you find that a witness has testified falsely in any one material part of his testimony, you should look with distrust upon the other evidence given by such witness and



if you find that any witness has wilfully testified falsely, it will be your duty to disregard entirely all evidence given by such witness unless it is corroborated by other evidence which you do believe. The testimony of a witness is said to be corroborated when it is shown to correspond with the testimony of some other witness or comport with facts otherwise known or established by the evidence.

The rules of evidence ordinarily do not permit a witness to testify as to his opinions or conclusions. An exception to this rule exists in the case of an expert witness. A witness who, by education, study and experience, has become an expert in any art, science or profession, may state his opinion in a matter in which he is versed and which is material to the case and he may also state the reasons for such opinion. You should consider each expert opinion received in evidence in this case and give it such weight as you think it deserves. Such opinion will be judged upon the same basis as you would judge the opinions of lay persons who have testified, except that you are entitled to give it more weight if you decide that, because of the experience and training of the expert, his opinion is more likely to be accurate than that of an untrained person. You may reject the opinion of an expert witness entirely if you think the reasons given in support of it are unsound.

I shall now outline the contentions of the parties.

Plaintiff, Moist Cold Refrigerator Company, alleges that prior to the commencement of this action,

all of the rights of the patentees in the original and the reissue Bronaugh and Potter patents were assigned to it, and that it is the sole owner of all patent rights involved in this litigation.

As such owner, plaintiff filed this action for patent infringement against Lou Johnson Company, a wholesale distributor of Admiral and Amana refrigerators, and against Meier & Frank Company, a retail distributor of these two refrigerators. Shortly after the commencement of this action, [1490] both the Admiral Corporation and Amana Refrigeration Company voluntarily became parties to this action and are defending the case. Therefore, any judgment that may be rendered in this case will be for or against them. Neither the Lou Johnson Company nor Meier & Frank has any interest in this case.

The Admiral Company and Amana Company, in their answers, denied the allegations that the Moist Cold Refrigerator Company was the sole owner of all the patent rights involved in this litigation. This then will be your first inquiry. You will recall the testimony of Mr. Potter with reference to the various corporations that at one time or another have had interests in these patents, and you will also recall his testimony concerning the number of people who are making monthly payments to Mr. Potter in connection with this litigation, and who Mr. Potter contends have no interest in the plaintiff corporation or in the reissue patent in suit.

On the issue of title, plaintiff has the burden of

proof to establish by a preponderance of the evidence that it owns all of the patent rights involved in this litigation. I leave it to you to determine, as a matter of fact, whether plaintiff has proved this. Of course, if you find that plaintiff has failed to prove it, you will find in favor of the defendants. [1491]

The Admiral Company and the Amana Company contend that the patent in suit, namely, Bronaugh and Potter Reissue Patent No. 23,058, is invalid and void. They further contend that none of their refrigerators infringe the claims of such reissue patent event if the reissue patent is valid.

A patent is a grant by the United States of the right to exclude all others from the manufacture, sale and use of a particular invention for a period of 17 years in exchange for the disclosure of that invention to the public.

The original Bronaugh & Potter Patent, No. 2,056,165, was issued October 6, 1936, to Thomas I. Potter. It covered a combination of known refrigeration elements and principles to create separate refrigeration compartments for foods desired merely to be cooled and those desired to be frozen, and to eliminate the necessity of defrosting. The sole claim was to the combination and not to a single element therein, all of which elements were well known.

As I explained to you at the beginning of the trial, this patent was surrendered because in an action on the original patent, the Court of Appeals for the Seventh Circuit held that the patent was invalid. By reason of such holding, the owners of

the patent went back to the Patent Office, and by making changes in the claims and by surrendering the old patent, secured Reissue Patent No. 23,058 on December 14, 1948, and it is this reissue patent which is [1492] the basis of this action. A reissue patent is identical to an original patent except that it is issued when the original patent was defective or contained certain errors and the Patent Office finds that the defects or errors have been corrected.

Both the original patent and the reissue patent were granted under an Act of Congress which provided for the issue of a patent to any person who has invented or discovered any new and useful art or machine or any new and useful improvements thereof not known or used by others in this country before his invention or discovery thereof, and not in public use or sale or not patented or described in any printed publication before his invention or discovery for more than two years prior to his application. This is the basic law governing the granting of patents, and I shall now take up the pertinent provisions of this law in relation to the contentions of the parties and the evidence adduced at the trial in support of such contentions.

In order to obtain a patent, a person must show, first, that he invented or discovered a new and useful machine or a new and useful improvement to such machine. The granting of a patent by the United States Patent Office carries with it the presumption that the patent is valid, and, therefore, when the Patent Office issued the original patent



and likewise when it issued the reissue patent, the patents [1493] themselves are *prima facie* evidence of both novelty and invention. This is not a conclusive presumption, but merely a rebuttable one, and you will recall that the Court of Appeals, in spite of this presumption, found that the original Bronaugh and Potter patent was invalid. In other words, it is a rule of evidence which casts the burden of proving invalidity upon the defendants by clear and convincing evidence.

The question of whether a patent discloses an invention divides itself into two considerations:

(First) Was the machine anticipated? In other words, was the same thing disclosed in an earlier patent, or had the same thing been publicly known or done? And,

(Second) If this same thing was not patented or described or known before, were there other machines so nearly like the one described in the claims of the patent that it needed no inventive ability to make the machine which the patent claims to describe, but would a person skilled in the art, in this case the art of refrigeration, naturally have made such changes or improvements?

Stated differently, invention is to be distinguished from the workmanship of a good mechanic or engineer skilled in the art of refrigeration. [1494] The exercise of mechanical skill, which does not amount to invention, is embraced in such common expressions as "expected skill of the calling" or

the "skill of the art." With the rapid advance of science and technology, the level of expected skill in many fields is constantly rising. Knowledge of the prior art is not limited to the knowledge of the public generally nor to those carrying on routine work in a complex and technical field, but embraces the knowledge of experts—trained engineers—who were working in the field of refrigeration, at the time of the alleged Potter and Bronaugh [1495] invention.

A person who conceives some machine and applies for a patent thereon is conclusively presumed to know all the same or similar machines which were disclosed in patents and which were publicly known or used by anyone else at a date more than two years prior to the date of his application whether, as a matter of fact, he actually knew of them or not. What was previously patented or described or publicly known is collectively spoken of as "the prior art" or "the prior state of the art."

Such prior patent must disclose the invention in a complete enough form to accomplish the same result accomplished by the claimed invention in substantially the same way. It is not sufficient to constitute an anticipation that the device relied upon might, by modification, be made to accomplish the function performed by the patent in question in the same way if it were not designed or adapted, nor actually used, for the performance of such function.

However, all of the elements or parts of a claim need not be found in a single prior art reference

in order to show lack of patentable invention. It is proper to look to the entire prior art, and the mere fact that some of the elements of a combination claim are found in one prior art patent and other elements are found in a different prior art patent does not render the teaching of either or both of such prior art patents ineffective as a guide for ascertaining novelty. [1496] There still remains the all-important question as to whether the new combination of such old elements amounts to patentable invention or whether it might reasonably be expected of a mechanic or a person skilled in the art.

Each element in an invention need not be new. Patentable invention may exist in combining old elements in a new way so as to produce a new result or an old result in a new or better way. But the fact that the new combination accomplishes a better result does not alone evidence invention. The combination of the selected elements may be an improvement upon anything the art contains, but if in combining them no novel idea is developed, there is no patentable invention, no matter how great the improvement may be.

Likewise, in order for a combination patent to be valid, the old elements which make up the machine must perform an additional and different function in combination than they perform out of it. In other words, the patented machine must exceed the sum of its parts, and there must be in such new or improved result the element of discovery—and the combination must produce some new or different function—one that has unusual or

surprising consequences. In this case the plaintiff does not claim that Bronaugh and Potter invented any new element. Every element in each claim is old in the art. These elements are a cabinet, [1497] a cooling compartment, a freezing compartment, thermal insulation, a cooling refrigerant expander, a freezing refrigerant expander, volatile refrigerant, a single liquefying unit, and a thermostat. Each of these elements is old in the art. Likewise, plaintiff does not claim that Bronaugh and Potter were the first to invent a household refrigerator with two or more compartments, one for the freezing of foods and the other for the cooling of foods, or moist cold refrigeration, or a non-frosting cooling compartment. These were also well known in the art at the time that Bronaugh and Potter applied for their original patent or conceived their invention. Plaintiff claims an invention solely on the basis of a combination.

In order to find that the machine described by Bronaugh and Potter constituted an invention, you must find that the elements in the claims were combined in a new combination which produced a result which had never previously been achieved and which was not within the exercise of mechanical skill of good mechanics or engineers skilled in the art of refrigeration. And, as I have previously told you, the total machine must exceed the sum of the parts; something new and surprising must have been achieved. Now, if you find that the patented structure meets this standard, then, of course, you will find invention; but if, on the other hand, you



find by clear and convincing evidence [1498] that this standard has not been met and that the various old elements in a new combination produce no new and surprising result or was within the skill of the art, no invention was present, and, of course, under those circumstances, you would find the patent to be invalid and hold for the defendants.

If an earlier patent discloses substantially the same things as the claims of a patent or that substantially the same thing was already in existence and known and used before one makes a discovery which is subsequently patented, that patent is said to be anticipated and, therefore, invalid. The questions of anticipation of a patent and of lack of invention in the same claim are closely related. They required a consideration of the same facts, and the instructions which I have heretofore given you concerning the burden of proof are equally applicable to both defenses.

In connection with the defense of anticipation, the defendants have cited certain prior art references, including Anderson, Lundgaard, Larkin, Davenport, and others. In connection with this defense, I now desire to lay down certain rules for you.

The presumption of validity and invention does not extend beyond the record before the examiners in the Patent Office. On the other hand, where the file wrapper [1499] discloses a patent was considered by the Patent Office during the prosecution of a claim for a patent and if certain claims were allowed the patentee, there is a presumption that

the Patent Office did find differences between the prior art patent or patents and the patent which is issued, in this case the patent in suit. This presumption, as I have previously stated, is merely a rule of evidence and casts the burden upon the alleged infringer to go forward with the evidence and prove by clear and convincing evidence that the Patent Office was wrong in distinguishing the prior art from the patent issued. Therefore, in this case, the fact that Anderson and Lundgaard and Davenport were considered by the Patent Office carried with it the presumption that the combination of elements in the Bronaugh and Potter patent constituted invention, and if this presumption is to be overcome, the defendants must show by clear and convincing evidence that there were no distinguishable features of a patentable character between Anderson or Lundgaard or Davenport and the patent in suit. With reference to prior art patents which were not considered by the Patent Office, such as Larkin, no such presumption exists.

Although the same evidence is available on the defense of anticipation and on the defense of no invention, the defense of anticipation is the narrower one, and even though a prior art reference may not fully anticipate a [1500] patent, the question is whether a mechanic or an engineer skilled in the refrigeration art, by applying Larkin and other prior art patents, might reasonably have been expected to have achieved the result described in the patented structure.

At the trial plaintiff introduced evidence in support of its contention that the patented invention filled a long-felt want and that it enjoyed commercial success or would have enjoyed commercial success but for manufacturing difficulties beyond the control of the inventors and those who owned the patents. But commercial success without invention will not make patentability. Evidence concerning commercial success is relevant where there is doubt that the patented structure meets the standards which I have laid down for you as to invention, and in such doubtful cases it is one element to be considered in determining whether the patentees actually made an invention. It was for this purpose, and this purpose alone, that I admitted evidence concerning commercial success. However, for commercial success to have any meaning, the success must have been due to the patented features of the device rather than other considerations, such as advertising, promotion, salesmanship, and other factors which are important in determining the success or failure of a product. Also, any commercial success must be public acceptance of the devices described in the patent, and not merely devices in the same general field. [1501]

It is admitted in this case that plaintiff's patent covers something more than merely a household refrigerator with a freezing compartment and a cooling compartment in the same box. This had been shown earlier by Anderson and perhaps others. Now, the law does not require a patentee to use

his patented invention or make, sell, or use the device covered by it. Therefore, even though a device may have been patented and known to those skilled in the art, it may not have been used, manufactured, or sold. Therefore, even though there may have been a widespread demand for two-temperature boxes, that, in and of itself, is not evidence of commercial success of the patented structure. You must find that the combination described in Potter and Bronaugh was a commercial success.

Patents for machines consist substantially of three parts. First, a drawing of the device; second, a specification, which is a verbal description of the device illustrated in the drawing; and, third, which is the most material part, the claims of the patent. It is the law that after a man has illustrated and described his device, he must particularly point out and distinctly claim the part, improvement or combination which he claims as his invention. He may show and describe many things in the drawings and specifications that he did not invent; but when it comes to the claims, he must there define or describe his exact [1502] invention so as clearly to distinguish it from what was old, that is, from what existed before his invention. The claims of the patent are the measure of the grant from the Government to the patentee. He cannot claim something which he does not show or describe; nor something which he did not invent. He can claim only the thing which he has invented and his claims must define that particular thing so that the public will



know what that thing is and be able to avoid infringing it.

The function of a patent claim is not merely to outline or to summarize what is shown and described, but rather to define the exact boundaries of the invention—that is, to determine with precision or to mark out clearly the boundaries or limits of the invention.

Neither the specification nor the drawings of a patent can be infringed; only the patent claims can be infringed.

Plaintiff relies on all four claims of its Reissue Patent 23058, and it asserts that all of such claims are valid and were infringed by the accused structures; that is, by the Admiral and Amana refrigerators.

It is conceded that Claim 2 is the broadest claim; that is, it is plaintiff's best claim. I shall, therefore, read it verbatim:

“2. A household refrigerator which in [1503] normal operation provides above-freezing moist cold air for preserving in a refrigerated condition foods susceptible to moisture loss by evaporation and below-freezing dry cold air and a dry cold surface for preserving foods in a frozen condition, said refrigerator comprising a cabinet having a cooling compartment and a freezing compartment, thermal insulation around said compartments thermally insulating said compartments from each other and from the outside atmosphere, a cooling refrigerant expander having heat-conducting surfaces within

said cooling compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature above 32° F. while withdrawing heat from said compartment, whereby air in said cooling compartment is cooled thereby to a temperature above 32° F. and is maintained at a humidity whose relative value is at least 100% at 32° F., a freezing refrigerant expander having heat-conducting surfaces within said freezing compartment and constructed and arranged to maintain its heat-conducting surfaces at a temperature well below 32° F. while withdrawing heat from said compartment whereby air in said freezing compartment is cooled thereby to a temperature well below 32° F., volatile refrigerant [1504] in said expanders, a single liquefying unit associated with said expanders and constructed and arranged to condense refrigerant expanded by heat extracted from both said compartments, the volatile refrigerant circulating through said expanders being the sole heat-extracting medium, and a thermostat responsive to the temperature in one of said compartments controlling the operation of said liquefying unit."

I might add here that that is called a description, and I merely want to say that all of the elements described in this claim are essential to the validity of the plaintiff's claim, and, as I shall tell you later, you must find that the accused structure has all of these elements, or the equivalent thereof, in order to find infringement.

Claim 1 is like Claim 2 except that air in each compartment is defined as an operating element of the combination.

Claim 4 is like Claim 2, except that it provides for greater thermal insulation around the freezing compartment than around the cooling compartment and a thermostat responsive to the temperature in the cooling compartments instead of either compartment.

And Claim 3 is the narrowest claim, since, in addition to all of the elements set forth in Claim 2, it [1505] provides for both air and differential thermal insulation.

You will have with you in the Jury Room a copy of this reissue patent, and you can check each of the claims for yourselves.

I have already instructed you at length on the question of anticipation and invention, but I want to correlate these and other defenses of the defendants with the precise claims that they are making in this case.

First, Defendants contend that the alleged invention set forth and claimed in the Letters Patent issued to Bronaugh and Potter had been shown, described and patented prior to the time that Bronaugh and Potter are alleged to have made their invention.

Second: That the patent in suit does not describe an invention, and the machine therein described, at most, represents an improvement that was obvious to anyone "skilled in the art."

I shall not instruct you any further on these two contentions because I have already instructed you

at great length concerning them. If you find that either or both of such contentions have been proved by clear and convincing evidence, your verdict must be in favor of the defendants.

Third: Defendants next contend that the specification in the reissue patent is not in such full, clear and concise terms as will enable a person "skilled in the art" [1506] to make and use the same. This contention relates to the alleged failure of the patentees to describe in the specification what was described as a fin coil or a brine tank.

The law provides:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

I leave it to you to determine as a question of fact whether there was a disclosure in accordance with the law. If it clearly appears that there was no such disclosure in the specification, you must find the patent invalid.

The defendants next contend that the claims of the patent are vague, indefinite and ambiguous and do not point out and distinctly claim the subject matter which the patentees regard as their alleged invention.



The following is a statement of the applicable statute:

“The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”

It is important that the claims define the particular thing claimed so that the public will know what that thing is and be able to avoid [1507] infringing it.

The monopoly of a patent is a valuable right. It permits the holder thereof to exact toll from all those who desire to use it. No such monopoly should be given to anyone unless the monopoly is specifically and definitely defined. When a patentee maintains that his invention resides in a new combination of old elements, the law requires that the combination claims should be scrutinized with the care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. When a patentee has added nothing to the total stock of knowledge, but merely brings together segments of prior art and claims them in congregation as a monopoly, the patent is invalid. As I told you before, a combination to be valid must produce some new or different function—one that has unusual or surprising consequences.

You will have with you in the jury room each of the four claims of the reissue patent. You can examine them, yourselves, in the light of the testimony given by the two patent experts, Mr. Norman

Parker for the plaintiff and Mr. Glenn Muffly for the defendants. As you will recall, they are in sharp disagreement as to the meaning of the patent claims, and it will be for you to determine from all of the evidence whether the patent claims distinctly set out the matters which the patentees regard as their invention.

If it clearly appears that all four claims [1508] do not meet the statutory standard, then, of course, you would find the patent invalid. However, the mere fact that you find one of such claims does not meet the standard does not necessarily mean that the other claims are likewise deficient. Each claim must be considered separately. Only such claims as do not meet the statutory standard are invalid.

I remind you that each of these contentions asserted by the defendants is to be separately considered and decided by you upon all the evidence in the case, bearing in mind that the burden rests upon the defendants to establish one or more of these contentions by clear and convincing evidence. And if the defendants fail to sustain this burden as to any of them, of course, you must find all the claims valid; but, if on the other hand, you find that the defendants have established one or more of such contentions by clear and convincing evidence, the patent would be invalid, and your verdict must be in favor of the defendants. It may be that the claimed invalidity might not affect all of the claims of the patent, and if so, only such claims as are affected would be invalid.

I will submit to you a number of interrogatories

in connection with the issue of validity, and you should answer all of them in accordance with these instructions. However, I will go over the questions with you in detail [1509] and will instruct you further at that time.

If you find in favor of the defendants on the question of validity—that is, if you find that all claims are invalid—your deliberations will be at an end, and you will bring in a verdict in favor of the defendants. However, in addition to the general verdict that will be submitted to you, please answer the interrogatories relating to the question of validity.

If you find that one or more claims in the patent in suit is valid, you will then consider the question of infringement.

Infringement is to be found when the accused structures accomplish substantially the same result by substantially the same means as does the patented invention. Or, stated differently, in order for there to be infringement you must find that there is identity of structure, identity of function and identity of result between the accused refrigerators and the claims of the patent in suit. By this is meant that the construction of the parts of the accused refrigerators, the way in which they operate, and the result achieved by this operation is substantially identical with that of the patent.

Plaintiff must show that the defendants' refrigerators embodied all of the elements included in one or more of the claims; that those elements in the accused [1510] refrigerator acted or operated in

substantially the same manner as the elements in the patent claims to produce substantially the results claimed. If you find that the defendants' refrigerators contained different elements from the device described by the patent claims or that the elements or parts of the defendants' refrigerators acted together in a different manner, or that the results claimed for the device of patents were not attained by the defendants' refrigerators, then you should find for the defendants on the question of infringement.

Of course, I need not tell you that only valid patents can be infringed, and if you come to the conclusion that the claims of the patent in suit are invalid, there could be no infringement regardless of how close the accused structures resemble the claims in the patent.

On the question of infringement, the plaintiff has the burden of proof, and it must prove by a preponderance of the evidence that the accused structures infringed one or more claims of the plaintiff's patent. Let me emphasize the word "claims." The plaintiff must show by a preponderance of the evidence that the refrigerators sold by the defendants were constructed not in accordance with the refrigerators sold by the Potter Refrigerator Company nor in accordance with the devices shown or described in their patent, but in accordance with the claims of the patent. In other [1511] words, you can only infringe patent claims.

Now the defendants contend that there are substantial differences between the accused structure



and the claims of plaintiff's patent. Before taking up these specific claims, I desire to point out that in connection with the question of infringement the jury may look to the operations of the accused structures in the light of what is done and how it is done. Variances which are insubstantial or sham, which do not prevent the accused operations from being in essence of that of the patent, do not avoid infringement.

This is another way of saying that the accused structures must substantially accomplish the same result by substantially the same means as does the patented invention. In patent law, the interpretation of the word "substantially" depends upon the character of the invention involved. If the invention is a pioneer one, the word "substantially" has a broad meaning, but if the invention is a minor or narrow one, the word "substantially" means practically "identical." In patent law, this is known as the range of equivalents.

Where a patentee has made a substantial advance in the art, he is entitled to a broad and liberal range of equivalents. But where the art is close; that is, where the thing invented is not of a pioneer character but is [1512] merely a narrow improvement of a known machine or art, then the patentee is only entitled to a narrow range of equivalents. In other words, when the range of equivalents to which a patentee is entitled is narrow, the accused structures must be practically identical to the claims of the patent.

There was testimony that the Bronaugh and Potter patent was a long stride in the refrigerator art, and on the other hand, there was testimony that at the time of the alleged Bronaugh and Potter invention, there were in excess of 40,000 patents relating to electric refrigeration on file in the United States Patent Office.

As you know from the arguments and the previous instructions, all of the elements in the claims in the patent in suit are old in the art. Plaintiff does not contend that Bronaugh and Potter invented a two-temperature refrigerator, one with freezing compartment and the other a cooling compartment standing alone, nor does it claim that Bronaugh and Potter invented moist cold or a non-frosting coil. In view of such facts, and the histories of the original patent and the reissue patent as disclosed in the file wrappers, I leave it to you to determine whether this is a pioneer patent entitled to a wide range or equivalents or a narrow improvement in a crowded field entitled to a very narrow range of equivalents.

As I said before, the defendants contend that even [1513] if Bronaugh and Potter reissue patent is valid, there is no infringement because there are essential differences between the accused structures and the claims of the patent in suit:

First: Defendants contend that all of the claims call for cooling coils within the cooling compartment and that in the accused refrigerators the cooling coils are outside the cooling compartment.

Second: Defendants further contend that all claims call for freezing coils within the freezing compartment, and in the accused refrigerators the freezing coils are outside the freezing compartment.

These are not in the exact words of the claims, but by referring to the claims you can get the exact words.

Your determination of these two contentions is dependent upon whether you find that the word "compartment" refers solely to the portion of the refrigerator in which the food is stored or whether it includes the frame and the portion of the refrigerator within the insulation. On this issue there is a sharp conflict between the experts. There was evidence of a later Potter patent introduced to show what Potter and Bronaugh meant by the term "compartment," but your determination of the meaning of the word "compartment" is not the interpretation of that word by Potter in the latter patent, but what the word "compartment" would mean to a person "skilled in the art" after examining the drawings and the specifications of the patent in suit. Therefore, [1514] what Potter and Bronaugh disclosed in the patent in suit is important, and you should look to the drawings and the description to determine if you can what Bronaugh and Potter describe as the compartment in the patent in suit. The cooling compartment is designated 14, and the freezing compartment 12 and 13.

Third: Defendants contend that all of the claims of the patent call for a single liquefying unit but

in the accused structure there are two liquefying units.

Fourth: All of the claims call for a volatile refrigerant in the coils. In the accused refrigerators there are two separate and distinct volatile refrigerants, each flowing through separate and distinct circuits.

You will recall the testimony that in the accused structures, there is one liquefying unit for the cooling compartment and another liquefying unit for the freezing compartment, each of which is in a separate circuit, and that the liquid in each circuit does not intermingle with each other. However, there are two plates between these two circuits, which permit heat to flow from one circuit to the other.

Now the plaintiff contends that this arrangement in the accused structure is merely an improvement of the single circuit shown in Bronaugh and Potter, but that such improvement embodies all of the essential features of the claims of Bronaugh and Potter and is the full equivalent thereof. [1515]

I leave it to you to determine whether, in the light of the instructions I have heretofore given you, the arrangement in the accused structure is the full equivalent of the single liquefying unit and volatile refrigerant in the patent claims.

I also call your attention to the fact that the defendants claim that this type of primary and secondary circuit used in the accused structures



follow the Gibson patent, which is owned by the Frigidaire Division of the General Motors Corporation and to which defendants pay royalties. This fact, and this fact alone, would not exonerate the defendants if you find that these circuits were the full equivalent of the structures claimed in Bronaugh and Potter, but it is evidence for you to consider on the question of infringement.

If plaintiff fails to prove by a preponderance of the evidence that the organization of these two circuits in the accused structure is the full equivalent of the claims of Bronaugh and Potter, you will find that the accused structures do not infringe the claims of Bronaugh and Potter, and you will find for the defendants.

Defendants, as their fifth and final contention, allege that the accused structures are of the type commonly known as the "cold wall refrigerators" as distinguished from the structures described in the patent in suit which are of [1516] the type commonly known as the "finned coil refrigerators," and that there are essential differences between these two types of household refrigerators. The plaintiff asserts that in essence the cold wall refrigerator is merely an extension of the finned coil and is the full equivalent thereof. In the light of the instructions I have given you with reference to range of equivalents, I leave it to you to determine whether that is or is not true.

As I previously told you, each element described in the claims in the patent in suit are essential and in order to find infringement you must find that

the accused structures contain all of such elements or their equivalents. If you find that the accused structures do not contain one or more of such elements or their equivalents, you must find that the accused structures do not infringe the claims of the patent in suit, and your verdict must be for the defendants regardless of whether the patent is or is not valid.

If you find that the accused structures do not infringe the claims of the patent in suit, your deliberations will be at an end, and you will return a verdict in favor of the defendants. However, if you find that one or more claims of the patent in suit is valid and if you find that the accused structure infringed the claims of plaintiff's patent, then you will consider the question of damages. The mere fact [1517] that I am instructing you on the question of damages does not mean that I am or am not of the opinion that the patent is valid or that the claims have or have not been infringed. On those issues I am expressing no opinion.

Damages, like any other proposition, must be proved by a preponderance of the evidence upon the part of the party making the claim, and plaintiff being the claimant has the burden of proof on this issue. The amount to which you find plaintiff is entitled, if you find it is entitled to damages, must not be based on speculation or conjecture. It must be reached and founded upon an unprejudiced consideration of all the facts in the case and without any sympathy or prejudice or a desire to punish anyone and without any thought of plain-

tiff's financial condition or the defendants' ability to pay.

The damages to which plaintiff is entitled are to be determined on the basis of what would be a reasonable royalty for the use of its patent, and by applying that royalty rate to those refrigerators manufactured by the defendants which infringed the claims of plaintiff's patent.

A reasonable royalty is an amount which a patent owner, willing but not compelled to grant a license, would accept, and which a person desiring to manufacture and sell the patented article as a business proposition, but not compelled to acquire a license, would be willing to pay as royalty in the expectation of being able to make and sell the patented article in the market at a reasonable profit. [1518]

You have heard the testimony of Mr. Parker, a patent expert, in response to a hypothetical question as to what would be a reasonable royalty under the patent in suit. His conclusion was based upon the assumption that all of the facts contained in the hypothetical question were true. If you should find from the evidence that the facts assumed as to any one of these elements in the hypothetical question were not true, you may disregard the answer to such question.

There was also introduced in evidence licensing agreements between Admiral Corporation and General Motors Corporation covering the Gibson patent and similar patents. You may consider these licensing agreements, as well as the other licensing agree-

ments introduced in evidence, in addition to the other testimony concerning the character of the invention, to determine reasonable royalty.

A pioneer patent would be entitled to a greater royalty than a narrow patent in a crowded field. The earnings in the industry, the profitableness of the patented device and all of the other facts introduced in evidence may be considered by you in determining reasonable royalty.

There will be submitted to you a general verdict and a special verdict. If you find in favor of the plaintiff, you will use the general verdict which reads as follows:

“We, the jury, find our verdict in favor of [1519] the plaintiff, Moist Cold Refrigerator Co., Inc., and against the defendants, and assess plaintiff’s damages against the Admiral Corporation at \$. . . . . and assess damages against the Amana Refrigeration, Inc., at \$. . . . .

“Dated this . . . day of December, 1955.

.....,

“Foreman.”

In the Federal Court all verdicts must be unanimous. Therefore, before you can return a verdict in favor of the plaintiff, each person on the jury must agree, first, that one or more claims of plaintiff’s patent is valid; second, that such claim or claims have been infringed by the accused structures of the defendants; and that the plaintiff suffered damage thereby.



On the question of damages, each juror must agree that the amount allowed is proper. If you come to the question of damages, please remember that the jury is not permitted to strike an average from the amount which each juror believes that plaintiff should receive; in other words, you may not agree in advance that the total amount of the sum which each juror believes plaintiff is entitled from a particular defendant, divided by 12, shall be the verdict of the jury. Neither shall the verdict be determined by any other mechanical means. Of course, if you get to the [1520] question of damages, you must discuss it fully, just as you do every other phase of the case, and on the basis of your discussion arrive at a figure which is satisfactory to each juror—but don't do it by agreeing in advance to add the amounts each juror feels plaintiff is entitled and then dividing the total by 12.

If, on the other hand, you find in favor of the defendants, you will return the following verdict:

“We, the jury, find our verdict in favor of the defendants, and each of them, and against the plaintiff.

“Dated this . . . . day of December, 1955.

.....,

“Foreman.”

The verdict, whether for the plaintiff or the defendant, is signed only by the foreman and, therefore, I want to caution the foreman, whoever he or she may be, that the verdict represents the unani-

mous opinion of each of the jurors whether it be either for the plaintiff or the defendants.

Now, in addition to the general verdict, at the request of both parties, special interrogatories are being submitted to you.

The first of these interrogatories, under the title of validity, reads as follows: [1521]

“A. Does the claimed combination of elements (part) in the Bronaugh and Potter reissue patent produce some new and different function, one that has unusual or surprising consequences?”

I have already fully instructed you on what constitutes invention, and this interrogatory is directed to that question.

The second interrogatory reads as follows:

“Q. Did Bronaugh and Potter make any invention over the Anderson patent?”

In connection with your consideration of this question, you shall consider two things: First, anticipation. Did Anderson fully anticipate Bronaugh and Potter? If it did, your answer should be “No.” Likewise, if the differences between Anderson and Bronaugh and Potter are such as would have been obvious at the time the invention was made, to a person skilled in the refrigeration art, your answer should likewise be “No.” Your answer to this interrogatory should be “Yes” if you find that Bronaugh and Potter made some discovery of a patentable character. Please remember that in this and other interrogatories relating to validity, the plain-

tiff has the advantage of the presumption of validity, and the defendants must show invalidity by clear and convincing evidence.

The third interrogatory reads as follows:

“Did Bronaugh and Potter make any [1522] invention over what is shown in the Anderson patent plus the Larkin patent?”

Anderson, you will recall, disclosed a two-temperature refrigerator, and Larkin disclosed a finned coil. As I explained to you previously, it is proper to look to the entire prior art. To determine invention and the mere fact that some of the elements of a combination claim are found in one prior art patent and other elements are found in another does not render it ineffective as a guide for ascertaining novelty. There still remains the all-important question as to whether the combining of such old elements amounts to patentable invention or whether it might be reasonably expected of one skilled in the art.

The next question refers to the validity or invalidity of each claim in the patent. I have already told you that Claim 2 is the broadest, and I have explained the differences between Claim 2 and the other claims. This interrogatory reads:

“Do you find the following claims to be vague, indefinite, or ambiguous?”

Then there is Claim 1 and you are supposed to answer that “Yes” or “No”; and the same for 2, 3 and 4.

Now, I am going to make a comment on this. There hasn't been very much evidence as to specific claims. Most of the evidence that has been

introduced is either that [1523] all the claims are valid or all the claims are invalid. Frankly, I don't know how you could answer one of these questions from the other and, therefore, it seems to me that if you find that the patent is valid you will find all the claims valid but if you find that the patent is invalid you will find all of the claims invalid.

Does anybody have any objections to that statement? Mr. Cuninghame, do you have any objection to that statement?

Mr. Cuninghame: Yes, your Honor.

The Court: All right. Well, then, I will withdraw the statement and you can look at each claim. You might find one valid and the other invalid.

The next group of questions relate to infringement. The first one reads:

“Do defendants' refrigerators have a cooling refrigerant expander (coil with or without extended surfaces) having surfaces within the cooling compartment?”

I have added after the word “expander” the words, “Coils with or without extended surfaces,” because in my view a refrigerant expander is the same as a coil. You will recall the testimony and also my instructions concerning the meaning of the words “cooling compartment,” and you will answer this question “Yes” or “No” depending upon whether you find that the cooling compartment is solely the space in which food is stored or [1524] is the structure within the insulation.



The next question reads as follows:

“Do the defendants’ refrigerators have only a single liquefying unit associated with refrigerant expanders (coils with or without extended surfaces) and constructed and arranged to condense refrigerant expanded by heat extracted from both the compartments?”

Here again it is my view that the refrigerant expanders refer to coils, either with or without extended surfaces. I have already instructed you on the basis upon which you shall determine this question. Therefore, I shall not repeat these instructions.

After all of these questions have been answered, it should be signed by the foreman. I desire to point out that if you find in favor of the defendants on the question of validity, you need not answer the questions relating to infringement. However, you may do so if you desire, and if it is early enough I hope you will.

Again, I desire to express my deep appreciation to each member of the jury for the careful attention you have paid to the evidence, the arguments of counsel, and now to my instructions. The case will be submitted to you within the next few minutes, but before that time, there is a legal matter that I desire to take up with the attorneys for the respective parties in chambers.

(Conclusion of Instructions to Jury.) [1525]

## EXCEPTIONS TO INSTRUCTIONS OF THE COURT

(The following proceedings were had in the Court's chambers out of the presence of the jury.)

The Court: Under our Rules the person taking an exception must essentially set out the part which he regarded as offensive or point out the failure of the Court to have given an exception. Go ahead, with that in mind.

Mr. Cuninghame: Well, if your Honor please—and I merely took notes as I heard the instructions given—my notes, however, do indicate that in your discussion of the Seventh Circuit Court of Appeals decision you said that patent as distinguished from the claim—you didn't say as distinguished; you said the patent was—original patent—was held invalid. I think that would be rendered unobjectionable if it were amplified to point out that it was the form of the claim that resulted in holding the patent invalid and not any invalidity in view of the state of the art or for application.

I understand that to be correct and I feel that the jury could reasonably and logically draw an erroneous conclusion from that description of the holding.

The Court: Well, Mr. Cuninghame, I subsequently told them that the owners of the patent went back to the Patent Office and by making certain corrections were reissued the [1526] patent.

Mr. Cheatham: Your Honor, may I state that I

had more time to think about these when we were drafting them not in Mr. Cuninghams presence and I would like to have him take up with me any point to see if I can tell him where the same thing has been recovered.

The Court: I think, as a matter of law, however, that the Court did declare the patent to be invalid. Isn't that the only thing they can do? If the claims were improperly set up, they declare the patent invalid.

Mr. Cuningham: Declare the claims invalid technically. I think your Honor used the word "patent."

The Court: Go ahead.

Mr. Cuningham: May I mention one more? This is perhaps an oversight. Your Honor did quote, and, correctly, I think, Section 112 of the Act down to but not including the last paragraph thereof. Of course——

The Court: That was left out with Mr. Cheatham's consent. He agreed to it.

Mr. Cheatham: I did, your Honor.

Mr. Cuningham: But, your Honor, the point is this: I don't know whether he agreed to this. I don't know how he could. You immediately followed the quotation omitting that paragraph with reference to the language of the A. & P.T. Company case as to the improbability of finding invention [1527] in a combination of old elements. Now, this, it seems to me—we are certainly entitled to have a statement as to the full statute that governs here.

The Court: I dictated it and then we decided that it wasn't——

Mr. Kolisch: That has to do with the functionality.

The Court: Yes; functionality.

Mr. Cuningham: Functionality and vagueness are identical.

The Court: The point was that by reason of the withdrawal yesterday of any claim of functionality——

Mr. Cuningham: Withdrawal of vagueness. And I think it is all right, but I think you have got too much vagueness in this case——claim of vagueness to omit that. And functionality is no more than vagueness. And that is without my consent.

The Court: You want the following portion included: "An element in a claim for a combination may be expressed as a means or a step for performing a specified function without the recital of structure, material or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material or acts, described in the specification and equivalents thereof."

Mr. Cuningham: Yes, your Honor.

The Court: I am going to reject your request, not [1528] because it was what Mr. Cheatham said yesterday but solely because of the fact that I think it is immaterial in view of the withdrawal of the claim of functionality.

Mr. Cuningham: And I have one or two other things. I note an objection in various places—I am not able at the moment to identify them—but simply



from my notes the word “surprising,” “surprising results.”

The Court: You may have an exception to the use of those words.

Mr. Cuninghame: May I limit it, your Honor, because I don't mean every use of “surprising,” but it is where you stated—

The Court: As one of the requirements for invention.

Mr. Cuninghame: As a requirement for there being patentable invention in a combination and that there must be unusual and surprising results.

The Court: You may have an exception to that. I used the word advisedly based upon my examination of the decisions from the Ninth Circuit.

Mr. Cuninghame: Now, the other thing that I notice here—well, I haven't too clear a note on it—but I recall it and that was as I understood it and I could be wrong about this—but, as I understood your instructions, you did not approve piecemeal anticipation, that taking—combining in 1955 patents that were old in the art but were widely [1529] separated at the time as far as anticipation. But it seemed to me that your instructions wiped out that very well-established law against piecemeal anticipation in that you advised that you could look at more than one patent, and I believe there is a specific question which combines the admittedly prior art of the Anderson patent with the Larkin patent which is not, as I understand it, in the prior art and as we have contended and as we have requested

your Honor to differentiate in the requests for instructions.

The Court: I think you are a little in error there for this reason: I did give the instruction which you requested on anticipation, but on the question of invention I followed the Seventh Circuit. The language is practically taken verbatim from the Seventh Circuit decision which says that piecemeal anticipation, there is nothing wrong with it in determining the state of the art and you can look through all of the prior art patents and add one element from one and one from another to determine whether there was an invention. That was the thought I expressed in my instructions.

Mr. Cuningham: Then, lastly, your Honor, I note a total failure to give any instruction to the effect or to leave to the jury any question as to whether Gibson was later or earlier than the invention—dates of invention of the patent in suit. Now, a great deal of our record and many of our witnesses—five at least—have given evidence on [1530] this. I think that—and, of course, the same remarks apply in respect to the Potter—later Potter file wrapper.

The Court: Mr. Cuningham, I did that for your benefit. That was an advantage for you because I did not cite Gibson as anticipation but merely as a completely different line and then I went even further and said that even though they did follow Gibson it wouldn't be exonerating for them.

Mr. Cuningham: Mr. Cheatham tells me—I just

took notes as you were giving the instructions. However, that is all the notes, and I have finished.

The Court: All right. That is fine. I thought that that was a very favorable instruction to the plaintiff.

Mr. Cheatham, have you got any exceptions?

Mr. Cheatham: No, your Honor. Thank you.

The Court: Who is going to make the exceptions for the defendants?

Mr. Kolisch: We have no exceptions, your Honor. The only suggestion we would have would be the instruction that before you can find any of the claims to be valid you must first be satisfied that the patentees did make an invention and "I have previously instructed you on the meaning of the term."

The Court: I have told them that so many times. If they don't know that now, they will never know it.

I was a bit concerned about that [1531] interrogatory concerning validity of each claim. I did that specifically for the benefit of the plaintiff.

Mr. Cuninghame: Your Honor, I think you did but, you see, the difficulty is these narrower claims like 3 and 4 are just clearly not met by Larkin combined with Anderson even though I think that combination is entirely improper.

(Whereupon the following proceedings were had in the courtroom in the presence of the jury.)

The Court: Ladies and Gentlemen of the jury, there are no changes that I desire to make in the instructions I have heretofore given you. As I told you before, the instructions which I gave will be transcribed and if you want them have the foreman notify Mr. Hart and they will be delivered to you.

There are one or two other things I would like to tell you. You will have the instructions, probably, because I saw a couple of you shake your heads "Yes," indicating you want the instructions. Now, I think that covers everything. But sometimes some of the jurors have an idea that they want to know something else, and under those circumstances you can notify Mr. Hart, but don't tell him anything other than that you have a question that you would like to have put. Don't tell him, "We are standing six to four," or something like that. It is none of his business [1532] how you stand. Don't ask him for any advice concerning the case. As far as food and drink—that is, water—we will see that you get that. But otherwise all of the communications are to be directed to me.

Now, it may very well be that your inquiry will not be answered because that will have to be done with the consent of both attorneys for the plaintiff and defendants. I think that you have all the instructions that you need to return a verdict and to answer the interrogatories. If the time comes that you want to look at the boxes themselves, arrangements will be made for the courtroom to be cleared



and you will have that opportunity. You just tell Mr. Hart. All other exhibits will be brought to the jury room for you.

(Whereupon the Crier was sworn.)

The Court: Now is the time for you to deliberate and the time has come when you can discuss this case with your fellow jurors to your hearts' content.

I want to talk to the two alternate jurors. Thank you very much for the patience which you have shown here today. You have been here every single day and we appreciate it. Under the law, however, only twelve people can deliberate, and you are now excused from further attendance at the trial.

(Thereupon the two alternate jurors were excused.)

(Whereupon the jury was excused and retired to their deliberation.) [1533]

(Court convened at 10:45 A.M. December 2, 1955, for the Court's consideration of the jury's question concerning interrogatories.)

The Court: Mr. Duyck, I have been advised that the jury has some problem or question concerning interrogatories, and it is for that reason that I assembled all the attorneys here because we would like to know what problem you are encountering with the interrogatories.

Mr. Duyck: Your Honor, these interrogatories are a thing, you might say, completely new to the members of the jury and we don't know their mean-

ing or their import. We are just too stupid to really ask questions about it. We would like to have explained to us what they are and why we have been presented with them.

The Court: Well, let me ask you one or two questions first. Aren't they clear?

Mr. Duyck: I think the interrogatories are concise.

The Court: Do you think they have hidden meanings or jokers in them?

Mr. Duyck: We don't understand why they have been presented to us.

The Court: All right. Well, under the law it is proper for a judge to submit to a jury either a general verdict or a special verdict. Now, many times in the Federal System [1534] only questions are propounded to a jury. Answer these Yes or No. There is no general verdict.

Now, in this particular case we submitted a general verdict, but in order to arrive at that general verdict you have to make certain decisions. In order to see what those decisions were, primarily for the benefit of the Court but also for the benefit of the litigants, we asked you certain specific questions. Now, there are no tricks, there are no hidden meanings in these things; they are just simple questions. For example, Question No. 2 or 3: "Did Bronaugh and Potter make any invention over what is shown in the Anderson patent plus Larkin patent?" You all know that Anderson had a two-temperature box. Larkin had invented the finned coil.

Mr. Duyck: Your Honor, may I interrupt? That

is the thing we run into in our mental block; we get: "Why does he want to know that?"

The Court: Well, I want to know because only by your being able to answer that question are you able to bring in a verdict either for the plaintiff or for the defendant. If you don't answer that question, you haven't made up your mind, really, of the basis of your decision. If you can't answer these questions, you are not entitled to bring in a general verdict because you haven't decided the case. Do I make myself clear now? [1535]

Mr. Duyck: I think you have made yourself very clear, your Honor.

The Court: Only by answering these questions, only by having an opinion on these questions can you honestly bring in a verdict. If you haven't resolved these questions, you are not ready to bring in a verdict.

Now, these things have to be decided. I should ask, although you haven't brought it up, Mr. Duyck, do you think an agreement can be obtained in this case?

Mr. Duyck: I think so. I think we have pretty well——

The Court: All right; that is enough. I just don't want to go any further on these things. Now, I think that practically every other question except the one I just gave to you or the statement or answer that I just gave you can find the answers in the instructions and I think probably you have referred to that considerably. Now, if there is anything else you want to know, let me know.

Mr. Duyck: I think, your Honor, that that clears up the situation.

The Court: All right. Fine.

This has been a long case. I know there are a lot of problems, and I know how conscientious you are, so don't worry about disturbing me or any of the attorneys. If you have a question, you let me know and I will get the attorneys up here and we will answer your question if we possibly can. [1536]

You are excused now.

(Whereupon the jury retired to continue their deliberation.)

[Endorsed]: Filed March 16, 1956. [1537]

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TRANSCRIPT OF PROCEEDINGS IN RE: DEFENDANTS' MOTIONS FOR DIRECTED VERDICT AND FOR JUDGMENT NOTWITHSTANDING THE VERDICT

Mr. Cheatham: May it please the Court, I would like to enter the appearance of Mr. Hugh L. Biggs on behalf of Plaintiff in this action.

The Court: We are always glad to have Mr. Biggs sit in this court.

Mr. Biggs: Thank you, your Honor.

The Court: Mr. Kolisch?

Mr. Kolisch: Your Honor, I would like to hand up to your Honor Defendants' Motion for Judgment Notwithstanding the Verdict and a memorandum of law, a short memorandum of law in support



of this motion. Copies of these papers were served on plaintiff on Saturday morning.

The Court: Proceed.

Mr. Kolisch: The basis for this motion is that the jury disregarded the Court's instructions and returned a verdict which is completely unsupported by the evidence and does not conform to the applicable law.

I think at the outset it would be well if the Court were to listen to a short portion of its own instructions.

The Court: Mr. Kolisch, you do not have to read my instructions to me. I have read them very carefully, and [2\*] I have read all the cases which you cited over the week end, except perhaps *McCroskey v. Braun*, 107 Fed. (2d) 143.

We will hear from the other side.

Mr. Cuninghame: May it please the Court, we have handed up in this elaborate binding a memorandum in opposition. I would like to stand on the memorandum for the details. Copies of that have been served today on my friends on the other side.

The position spelled out, if your Honor please, with some care and some particularity in the document, that is, the second document in the binder and which is labeled "Plaintiff's Memorandum in Opposition to Defendants' Motion Notwithstanding," takes up seriatim each of the points under the three chief headings, mainly alleged invalidity, noninfringement, and excessive amount of verdict. The effort has been throughout to cite chapter and verse

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\*Page numbering appearing at top of page of original Reporter's Transcript of Record.

for the record to show where there is ample basis in the record before this Court supporting the verdicts of the jury in all respects. I think I could do no better than to rely upon the statement. I am not trying to duck any argument, but it seems to me that what argument I would make would be, at best, a paraphrase and not as good a one as the brief upon which we now rely. Would that be satisfactory to your Honor?

The Court: It would be perfectly satisfactory with me. I know how I am going to decide this motion. I have read [3] the testimony, and I have read my instructions. I do not believe any useful purpose will be served to delay my decision on the motions for a directed verdict and for judgment notwithstanding the verdict.

I am of the opinion that the motions must be granted. I am also of the opinion that even assuming validity and infringement there is no rational basis for the amount of the verdicts that were rendered against defendants Admiral Corporation and Amana Refrigeration, Inc., or either of them.

Both before and during the trial I informed counsel that I wanted to submit this case to the jury because it had been pending for a long time. It had already been to the Court of Appeals once, and the expenses incurred by both sides were great. In addition to numerous depositions of witnesses residing in the East and South, there were a number of lay and expert witnesses from various parts of the United States, and out-of-town counsel were here for many weeks even before the trial.

At the conclusion of the plaintiff's case in chief I seriously considered directing a verdict in favor of the defendants because from the testimony and the exhibits, particularly the prior art patents, it did not appear to me that the plaintiff's patented device had met the rigid standards of invention laid down in *Berkeley [4] Pump Co. v. Jacuzzi Bros.*, 214 F. (2d) 785 (C.C.A. 9th, 1954); *Kwikset Locks v. Hillgren*, 210 F. (2d) 483 (C.C.A. 9th, 1954); and in numerous other decisions from our own Circuit as well as from the United States Supreme Court, involving the "assembling (of) old elements, the previous functional operations of which are not changed by their arrangement and inclusion in the device."

The patent in suit involves improvement in an household refrigerator. Each element in the alleged combination was old in the art. They consist of a cabinet, a cooling compartment, a freezing compartment, thermal insulation, a cooling refrigerant expander, a freezing refrigerant expander, volatile refrigerant, a single liquefying unit, and a thermostat. All of these elements, when combined together—and I am not using the word "combined" as a word of art—acted as they had acted in the past, and the end result did not exceed the sum of its parts. Or, stated differently, the old elements making up the device did not perform an additional and different function than they performed out of it.

I was also of the opinion that the alleged combination of the patent in suit "did not perform some

new and different function—one that has unusual or surprising consequences.”

The patent in suit consisted of a household [5] refrigerator having a separate freezing compartment and a separate cooling compartment operated by a single liquefying unit with the cooling compartment having a humid temperature, or moist cold, and with a non-frosting coil in the cooling compartment.

I, therefore, came to the conclusion that even if Anderson or some other prior art patent had not fully anticipated the patent in suit in every material part, it was nevertheless invalid because it did not meet the standards of invention as laid down in the decisions to which I have already referred.

I was also concerned about the fact that although it was conceded that the validity of the patent in suit is dependent upon the existence of a fin coil or other extended surface coil, such a coil was not disclosed in the specification. Plaintiff's expert testified that by looking at the drawing he could tell that a fin coil or a brine tank was described. He, therefore, contended that the failure to disclose the fin coil in the specification did not invalidate the patent. However, it appeared to me that the requirements of 35 U.S.C.A., Sec. 112, had not been met.

I likewise was in doubt as to whether the claims were sufficiently definite to satisfy the statute. In spite of such conclusions and doubts, I denied defendants' motion for a directed verdict at the end of plaintiff's case in [6] chief.

Thereafter, Mr. Glenn Muffly, defendants' refriger-



eration and patent expert, testified at great length concerning the validity of the plaintiff's patent in suit and also concerning infringement. The only information elicited from Mr. Muffly on cross-examination was that he regarded the Anderson patent as the closest to the patent in suit. Thereafter, Mr. Parker, plaintiff's expert, again resumed the stand and contradicted the testimony of Mr. Muffly with respect to certain conclusions about which he had testified.

When all of the evidence was in, the defendants again moved for a directed verdict on the same grounds which they had previously urged. Again, I seriously considered granting the motion because by that time it had appeared that, in addition to the patent being invalid, it had not been infringed.

There was no dispute about the structure of the accused devices. They were cold wall refrigerators as distinguished from the fin-type refrigerator which is exemplified in the patent in suit. Likewise, all of the claims of the patent in suit call for a single liquefying unit; in the accused structures there were two liquefying units, each of which had its own volatile refrigerant flowing through a separate and distinct circuit. [7]

Parenthetically, I might add that during the argument to the jury plaintiff's counsel stated that the use of a primary and secondary circuit in the accused structures was an improvement over the structure described in the patent in suit. I wondered at the time how he could establish identity of structure with this admission.

Although plaintiff's counsel denied that the doctrine of equivalents was applicable, the only basis I could discover upon which the jury might find identity of structure was in that doctrine. The jury, in answer to the special interrogatories, found them to be identical, a finding which in my opinion was proper only if the patent in suit was a pioneer one.

In spite of my added doubts concerning infringement, I decided to submit the whole case to the jury in the hope that another trial could be avoided. If I directed a verdict in favor of the defendants and the Court of Appeals held that I should have submitted it to the jury, then all of the time, trouble and expense incurred in this trial would have been wasted; but if I permitted the jury to make a determination and the jury found in favor of the plaintiff, I could then set aside the verdict and the Appellate Court would merely be presented with the questions of validity and infringement and could reinstate the verdict if they thought that I had erred. Unfortunately, the verdict of [8] the jury does not make this possible. As I stated previously, there is no rational basis for the amount of damages fixed by the jury.

Even if this patent is valid and infringed, it was a minor improvement in a crowded field, and in my view a royalty of 3 per cent on the selling price or 5 per cent on the manufacturer's price is completely out of line. In addition to a few licensing agreements, none of which showed such a high rate, the only other evidence was the testimony of Mr.

Parker based upon a hypothetical question, which assumed that the patent in suit was a pioneer patent or one that had made a long stride in the refrigeration art.

An examination of the file wrappers of the original patent, as well as the patent in suit, clearly showed that this was not the case.

I appreciate the fact that the jury made specific findings, which are contrary to those expressed in this opinion. In spite of my strong attachment to the right of trial by jury, I cannot avoid the responsibility which is mine merely because a jury found to the contrary.

Judge Bone, in *Berkeley Pump Co. v. Jacuzzi Bros.*, 214 F. (2d) 785, beginning at Page 791, clearly sets out the obligation of a trial judge in cases in which "the jury has departed from the relevant legal criteria by [9] which either a jury or a judge must be guided in their or his fact-finding function."

I think that this jury listened carefully to the evidence and tried to render an honest and intelligent opinion. In spite of the attempts of plaintiff's counsel to inject prejudice into the case, I think he was unsuccessful, and I think that the action which I took during the trial and in my instructions to dissipate any such feeling was successful. However, I think that the fault lies in the manner in which the case was presented by the defendants.

At no time was the jury adequately informed of defendants' contentions. The jury, after listening

to defendants' opening statement, must have come to the conclusion that the defendants were trying to withhold information from them. The witnesses were examined by defendants' counsel not with the view of convincing a jury, but solely for the purpose of appealing to the Court. It was a highly technical presentation, and the closing argument of counsel for the defendants can only be characterized as fantastic. I did not understand the "frost, defrost" argument which took up a large portion of time consumed by the defendants, and I am sure that the jury did not have the vaguest idea of what counsel was talking about.

However, I cannot permit a judgment on liability [10] or a judgment on damages to stand where there is no basis therefor. Neither the good intentions of juries nor the ineptness of lawyers is an adequate substitute for evidence.

As an equitable defense, the defendants have raised the question of unclean hands. It may very well be that the manner in which this case is being financed is a violation of New York law. I am also concerned about the scores of people who, according to Mr. Potter, are now contributing and who over a period of years have contributed over a Million Dollars to him and his companies in connection with the prosecution of this patent and this litigation. However, I do not believe that these facts justify a holding of unclean hands.

I merely add that it was primarily because of



these people that I did not direct a verdict earlier.

Counsel for the defendants may submit an order in accordance with this oral opinion, which will be transcribed and included in the file of this case and in any transcript that is sent to the Court of Appeals so that the Court of Appeals will know the reasons which motivated me to enter a judgment in favor of the defendants.

That is my opinion and my ruling.

Mr. Cuninghame: If your Honor please, in all deference, I do want to note on the record a serious objection to the statement contained in your Honor's opinion that I or anyone [11] on this side consciously endeavored to insert any prejudice in the case or did insert any prejudice in the case.

The Court: I have no reason to change any statement that I have made. I mentioned most of the things which I thought were prejudicial outside the presence of the jury. Only once did I call to the attention of the jury acts which I thought were prejudicial, and then I thought it was necessary because your remarks urgently required some action.

Mr. Cuninghame: May I ask what those are, sir?

The Court: Mr. Cuninghame, you are never satisfied with anything I ever say. In spite of the fact that I have tried time and again to be most generous with you and explain things to you in detail, no remarks of mine or no specificity on my part will ever convince you, and so I am not going to try this time.

I know that this case is going to be appealed to the Court of Appeals. It has always been my policy to co-operate in every way to see that a person gets a full and fair hearing before the Court of Appeals. I will make everything available to that Court which is within my power. I will give whatever extensions you need in order to adequately present your case. [12]

Mr. Kolisch: Defendants will submit an order in accordance with your opinion.

The Court: Very well.

Mr. Kolisch: Will it be necessary to have Findings of Fact and Conclusions?

The Court: No, I do not think that the Rules require it.

(Proceedings concluded.) [13]

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[Title of District Court and Cause.]

United States of America,  
District of Oregon—ss.

### CERTIFICATE OF CLERK

I, R. DeMott, Clerk of the United States District Court for the District of Oregon, do hereby certify that the foregoing documents consisting of Complaint, Intervenor's Answer (Admiral Corporation); Intervenor's Answer (Amana Refrigeration)

tion, Inc.); Order Allowing Amendment of Answers; Order to Amend Complaint; Order Amending Answers; Amended Answer; Final Pretrial Order; Supplemental and Amended Complaint; Motion for a Directed Verdict; Special Interrogatories to the Jury; Verdict; Defendants Motion Notwithstanding the Verdict; Judgment in Favor of Defendants and Order Granting New Trial; Opinion of the Court on Defendants' Motion for Directed Verdict and Motion for Judgment Notwithstanding the Verdict; Notice of Appeal; Bond for Costs on Appeal; Order Extending Time to Docket Appeal; Statement of Points on Which Appellant Intends to Rely on Appeal; Designation of Contents of Record on Appeal; Order Extending Time to Docket Appeal; Defendants' Designation of Additional Portions of the Record on Appeal; Amendment to Plaintiff's Designation of Contents of Record on Appeal; and Transcript of Docket Entries Constitute the Record on Appeal from a Judgment of Said Court in a Cause Therein Numbered Civil 6016, in which Moist Cold Refrigerator Co., Inc., an Oregon corporation is the plaintiff and appellant and Lou Johnson Co., Inc., an Oregon corporation, et al, are the defendants and appellees; that the said record has been prepared by me in accordance with the designations of contents of record on appeal filed by the appellant and the appellees, and in accordance with the rules of this Court.

I further certify that the cost of filing the notice of appeal, \$5.00 has been paid by the appellant.

In testimony whereof I have hereunto set my hand and affixed the seal of said Court in Portland, in said District, this 2nd day of March, 1956.

[Seal]

R. DE MOTT,  
Clerk.

By /s/ F. L. BUCK,  
Chief Deputy.

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[Endorsed]: No. 15057. United States Court of Appeals for the Ninth Circuit. Moist Cold Refrigerator Co., Inc., a Corporation, Appellant, vs. Lou Johnson Co., Inc., a Corporation, Meier & Frank Company, Inc., a Corporation, Admiral Corporation, a Corporation, and Amana Refrigeration, Inc., a Corporation, Appellees. Transcript of Record. Appeal from the United States District Court for the District of Oregon.

Filed March 7, 1956.

/s/ PAUL P. O'BRIEN,

Clerk of the United States Court of Appeals for the Ninth District.



In the United States Court of Appeals  
For the Ninth Circuit

Appeal No. 15057

On Appeal from the Decision of the United States  
District Court for the District of Oregon in  
Civil Action No. 6016

MOIST COLD REFRIGERATOR CO., INC., an  
Oregon Corporation,

Plaintiff-Appellant,

vs.

LOU JOHNSON CO., INC., an Oregon Corpora-  
tion,

Defendant-Appellee,

and

MEIER & FRANK COMPANY, INC., an Oregon  
Corporation,

Defendant-Appellee,

and

ADMIRAL CORPORATION, a Delaware Corpo-  
ration,

Defendant-Intervener-Appellee,

and

AMANA REFRIGERATION, INC., an Iowa Cor-  
poration,

Defendant-Intervener-Appellee.

#### STATEMENT OF POINTS ON APPEAL

Comes now the appellant, Moist Cold Refrigerator Co., Inc., and pursuant to the rules of this

Court, hereby adopts as its statement of points on appeal Statement of Points filed in the District Court on February 15, 1956, and designates the following parts of the record in this action to be material and to be printed.

BUCKHORN AND  
CHEATHAM,

By /s/ KENNETH S. KLARQUIST,  
Attorneys for  
Plaintiff-Appellant.

Dated: March 8, 1956.

Affidavit of service by mail attached.

[Endorsed]: Filed March 9, 1956.

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[Title of Court of Appeals and Cause.]

No. 15057

On Appeal from the Decision of the United States  
District Court for the District of Oregon in  
Civil Action No. 6016

DESIGNATION OF MATERIAL  
DOCUMENTARY EXHIBITS

Comes now appellant, Moist Cold Refrigerator Co., Inc., and pursuant to the rules of this Court, designates the following documentary exhibits to be material and asks that they be treated as physical exhibits to avoid the expense of reproduction of the same:

(a) Plaintiff's Exhibits 1, 2A, 2B, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T,

3U, 3LL-1 through -51, 3MM, 3NN, 3OO, 3PP, 3QQ, 3RR, 3SS, 3TT, 3UU, 3VV, 3WW, 3YY, 3AAA, 3BBB, 3CCC, 3DDD, 3EEE, 3EEE-1-2-3-4, 3GGG, 3KKK, 4A, 4B, 4C, 4D, 4AA, 4BB, 4CC-1 to and including -14, 4DD-1 to and including -11, 5A, 5B, 5C, 5D, 6T, 6U, 6V, 6W, 6X, 6Y, 6AA, 6DD, 6EE, 6FF, 6GG, 6HH, 6II, 6JJ, 6RR, 6SS, 6UU, 6XX, 6YY, 6ZZ, 6AAA, 6BBB-1-2-3, 6KKKK, 8A, 9A, 17, 19CC, 19S and 22.

(b) Defendants' Exhibits 105, 106, 107, 108, 109, 110, 111, 112, 113, 144M, 120A, 120B.

BUCKHORN AND  
CHEATHAM,

By /s/ KENNETH S. KLARQUIST,  
Attorneys for  
Plaintiff-Appellant.

Dated: March 8, 1956.

Affidavit of service by mail attached.

[Endorsed]: Filed March 9, 1956.

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[Title of Court of Appeals and Cause.]

COUNTERDESIGNATION OF  
MATERIAL EXHIBITS

Come now appellees pursuant to the rules of this Court and designate the following additional parts of the record as being material to the consideration of the appeal herein:

Plaintiff's Exhibits 16A and 16B.

Defendants' Exhibits 101, 102, 114A through

114L, 114N through 114R, 115, 116, 117, 117A, 118, 119A, 119B and 119C.

RAMSEY AND KOLISCH,

By /s/ J. PIERRE KOLISCH,

Attorneys for

Defendants-Appellees.

Dated: March 15, 1956.

Affidavit of service by mail attached.

[Endorsed]: Filed March 16, 1956.

[Title of District Court and Cause.]

COUNTERDESIGNATION OF  
RECORD FOR PRINTING

Come now appellees pursuant to the rules of this Court and designate the following additional parts of the record in accordance with Rule 7(7) of the rules of this Court:

Plaintiff's Exhibits 1 and 2A.

Defendants' Exhibits 105 through 113.

Item 5, appellant's designation of record for printing, should be corrected to paragraph 9(n).

RAMSEY AND KOLISCH,

By /s/ J. PIERRE KOLISCH,

Attorneys for

Defendants-Appellees.

Dated: March 15, 1956.

Affidavit of service by mail attached.

[Endorsed]: Filed March 16, 1956.



